Ontario. Hydro-Electric Inquiry Commission, 1922-1927

HYDRO-ELECTRIC INQUIRY COMMISSION

(HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO)

Reports on investigation of accounts

REPORT ON INVESTIGATION OF ACCOUNTS OF NIAGARA SYSTEM

Price, Waterhouse & Co.
ROYAL BANK BUILDING
TORONTO, ONT., CANADA

PRICE, WATERHOUSE & CO.
CANADA. UNITED STATES. MEXICO.
GREAT BRITAIN.

CONTINENTAL EUROPE, ETC.
PRICE, WATERHOUSE, PEAT & CO.
SOUTH AMERICA
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ALSO, GREAT BRITAIN
W. B. PEAT & CO.

ROYAL BANK BUILDING
TORONTO

October 9th, 1922.

W. D. Gregory Esq., Chairman,
Hydro-Electric Inquiry Commission,
36-38 King Street, East,
Toronto.

Dear Sir,

NIAGARA SYSTEM and NIAGARA RURAL LINES

In accordance with your instructions, we have made a general investigation of the accounts and records relating to the Niagara System and the Niagara Rural Lines, operated by the Hydro-Electric Power Commission of Ontario, and now beg to submit our report thereon:

SCOPE OF INVESTIGATION.

The books and accounts of the Hydro-Electric Power Commission of Ontario have been audited by Mr. G. T. Clarkson of Messrs. Clarkson, Gordon and Dilworth from the commencement of the Commission's activities, to October 31, 1921, and therefore, it was considered that our investigation should be limited to a general review of the accounts and an inquiry into any important questions of principle involved therein.

Under the system of accounting employed, the records in respect of the various assets and liabilities of the Niagara System and Niagara Rural Lines and of certain other systems are contained in, and form a part of, the general books of the Hydro-Electric Power Commission of Ontario, and therefore, separate balance sheets of each system are not prepared.

PRICE, WATERHOUSE & CO.
CHARTERED ACCOUNTANTS, AUDITORS,
TRUSTEES, ETC.

CONTINENTAL CHAMBERS,
PRICE, WATERHOUSE, BOX & CO.
SOUTH AMERICA
PRICE, WATERHOUSE, PALMER & CO.
ALSO, GREAT BRITAIN
W. B. PEAT & CO.

ROYAL BANK BUILDING

TORONTO

October 8th, 1922.

W. D. Gregory Esq., Chairman,
Hydro-Electric Inquiry Commission,
36-38 King Street, East,
Toronto.

Dear Sir,

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In accordance with your instructions, we have made a general investigation of the accounts and records relating to the Niagara System and the Niagara Rural Lines, operated by the Hydro-Electric Power Commission of Ontario, and now beg to submit our report thereon:

SCOPE OF INVESTIGATION.

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Under the system of accounting employed, the records in respect of the various assets and liabilities of the Niagara System and Niagara Rural Lines and of certain other systems are combined in, and form a part of, the general books of the Hydro-Electric Power Commission of Ontario, and therefore, separate balance sheets of each system are not prepared.

The accounts of the Niagara System as dealt with in this report, are as follows:

CAPITAL INVESTMENT:		
Niagara Power Development (Queenston-Chippawa)		$ 58,018,366.89
Transformer Stations, Transmission Lines, Right-of-Way, etc.		
Niagara System	$ 17,324,256.18	
Rural Lines	476,425.45	17,800,681.63
OPERATING ACCOUNTS		
RESERVE FOR RENEWALS:		
Niagara System	$ 2,222,365.90	
Niagara Rural Lines	6,356.37	2,228,722.27
RESERVE FOR SINKING FUND:		
Niagara System	$ 957,717.89	
Niagara Rural Lines	50,607.68	1,008,325.57
RESERVE FOR CONTINGENCIES		24,875.01
ACCOUNTS WITH MUNICIPALITIES		
Power Accounts Receivable:		
Niagara System	$ 476,448.68	
Niagara Rural Lines		
Balances due to Municipalities in respect to accounts paid by them in excess of costs of power		
Niagara System	Cr. 207,815.60	
Rural Lines	Cr. 1,022.31	Cr. 208,837.91
Balances due by Municipalities representing excess of cost of power over accounts paid by them		Dr. 190,814.41

We have prepared and attach the following Exhibits:

Exhibits I and II - Operating Accounts for the period of four years ending October 31, 1918, 1919, 1920 and 1921.
Exhibit III - Summary of Reserve for Renewals.
" IV - Statement showing the Basis of the Annual Rate for Reserve for Renewals
" V - Statement of Reserve for Sinking Fund
" VI - Statement of Reserve for Contingencies
" VII - List of Municipalities in the Niagara System, together with balances as at October 31,1921, resulting from the Adjustment, to the Cost of Power, of Interim Power Bills.
" VIII - List of Municipalities and others on the Niagara Rural Lines.
" IX - Statement of Accounts due by Municipalities in respect of the Cost of Power at October 31,1921, still unpaid at September 20,1922.
" X) - Excerpts from Contracts with Municipalities
" XI) and Companies
" XII)

The accounts of the Niagara System as dealt with in this report, are as follows:

CAPITAL INVESTMENT:

Niagara Power Development (Queenston-Chippawa)		$ 20,010,386.06
Transformer stations, transmission lines, High-tension, etc.	$ 17,224,780.16	
Municipal systems	476,206.46	17,700,986.62
Rural Lines		

CURRENT ACCOUNTS

Operating Expenses:		
Hydro System	$ 2,322,366.00	
Niagara Rural Lines	6,357.37	2,328,723.37

INCOMES (NET STATE):

Hydro System	$ 920,171.80	
Niagara Rural Lines	80,891.00	1,000,062.87

ADJUSTMENT AND DEFERRED ACCOUNTS:

Power Accounts Industrial:		
Hydro System	$ 476,445.52	
Niagara Rural Lines		
Reserve due to Municipalities		
Rural Lines		
Reserve for Depreciation		
Total Hydro Income of power	$r. 607,816.60	
Niagara System	$r. 1,320.81	$r. 606,495.81
Rural Lines		
Reserve due by Municipalities for expenditure excess of cost of power over accounts		$r. 190,814.11
Make up Loss		

The Hydro Accounts and Reserve the following Balance:

Exhibits I and II - Operating Accounts for the period of four years ending October 31, 1918, 1919, 1920 and 1921.

Exhibit " III - Statement of Reserve for Depreciation.

" IV - Statement showing the Results of the Annual Sale for Hydro-Electric Power.

" V - Statement of Reserve for Sinking Fund.

" VI - Statement of Reserve for Contingencies.

" VII - Liner of Municipalities in the Niagara System.

" VIII - Statement with Balance as at October 31, 1921, showing the Amount due Municipalities, on the Base of Power, of Industrial Power Units.

" IX - Statement of Municipalities and Others on the Niagara Rural Lines.

" X - Statement of Accounts due by Municipalities in respect of the Cost of Power at October 31, 1921, with Credit at September 30, 1922.

" XI - Statement showing Contracts with Municipalities and Consumers.

" XII

" XIII

HISTORY AND ORGANIZATION

Under the authority of the Power Commission Act, enacted April 20, 1907, by the Legislative Assembly, of the Province of Ontario, (Statutes of Ontario, Chapter 19, and also in accordance with the Revised Statutes of Ontario, 1914, Chapter 39) the Hydro-Electric Power Commission of Ontario, under trusteeship to the municipalities receiving power service, constructed plants for generating electrical power or energy, and transformer stations, transmission lines, distributing stations, etc., for the purpose of generating, transmitting and distributing power to Municipalities in Ontario.

Under date of March 29, 1909, The Power Commission Amendment Act - "An Act to Provide for the Transmission of Electrical Power to Municipalities" - was enacted, amending the 1907 Act, referred to above, for the purpose of validating specific contracts entered into by certain municipalities and others with the Hydro-Electric Power Commission of Ontario and for other purposes. The specific contracts mentioned in this Act are as follows:

Agreement, dated May 4, 1908, between the Hydro-Electric Power Commission of Ontario, the Municipal Corporations of Toronto, London, Guelph, Stratford, St. Thomas, Woodstock, Kitchener, Galt, Hespeler, St. Mary's, Preston, Waterloo, New Hamburg and Ingersoll. Excerpts of this Agreement are set forth on Exhibit X attached hereto.

Agreement between the Hydro-Electric Power Commission of Ontario and The F.H.McGuigan Construction Company, relative to the construction and erection of transmission lines, complete, as set forth in specifications, plans and drawings.

In the earlier years, power for the Niagara System was purchased, under contracts, directly from the Ontario Power Company of Niagara Falls, and the Canadian Niagara Power Company and indirectly

HISTORY AND ORGANIZATION

Under the authority of the Power Commission Act, enacted April 20, 1907, by the Legislative Assembly of the Province of Ontario, (Statutes of Ontario, Chapter 19, and also in accordance with the Revised Statutes of Ontario, 1914, Chapter 29) the Hydro-Electric Power Commission of Ontario, under jurisdiction to the Municipalities receiving power service, constructed plants for generating electrical power or energy, and transmission stations, transmission lines, distributing stations, etc., for the purpose of generating, transmitting and distributing power to Municipalities in Ontario.

Under date of March 24, 1922, the Power Commission Agreement Act - "An Act to Provide for the Transmission of Electrical Power to Municipalities" - was enacted, amending the 1907 Act, referred to above, for the purpose of validating specific contracts entered into by certain municipalities and others with the Hydro-Electric Power Commission of Ontario and for other purposes. The specific contracts mentioned in this Act are as follows:

> Agreement, dated May 6, 1908, between the Hydro-Electric Power Commission of Ontario, the municipal corporations of Toronto, London, Berlin, Waterloo, St. Thomas, Stratford, Galt, Brantford, St. Mary's, Preston, Niagara Falls, Port Colborne and Hamilton. Copies of the Agreement are set forth as Schedule A attached hereto.
>
> Agreement between the Hydro-Electric Power Commission of Ontario and the Niagara Transmission Company, relating to the construction and operation of transmission lines, conduits, as set forth in specifications, plans and drawings.

In the earlier years, power for the Niagara System was purchased, under contracts, directly from the Ontario Power Company of Niagara Falls and the Canadian Niagara Power Company and indirectly

from the Toronto Power Company. The delivery of power over the System's lines commenced in 1910; by November 1911 the System embraced twenty-three municipalities, and at the close of the fiscal year ending October 31,1921, power was being furnished to one hundred and twenty-two municipalities, the London Railway Commission, to twenty-four Companies and others and to the Essex System.

At the commencement of operations, the properties consisted of transformer stations, transmission lines and distributing stations, the power having been furnished by outside interests, as mentioned above. Under an Agreement, dated April 12,1917, the Commission acquired the capital stock of the Ontario Power Company of Niagara Falls, which Company owns the entire capital stock of the Ontario Transmission Company Limited. The properties of the Ontario Power Company comprise, in the main, a Hydro-Electric generating plant at Niagara Falls, and transformer stations, transmission lines, distributing stations and real estate, including rights-of-way. The properties of the Ontario Transmission Company Limited, consisting of transmission lines, distributing stations, etc., have been leased to the Ontario Power Company and are used by it in the transmission to its customers of electrical energy generated at the Power Company's plant.

The construction of the Queenston-Chippawa Canal and Works was undertaken by the Commission in 1917, under the authority of The Ontario Niagara Development Acts of 1916 and 1917, for the purpose of supplying electrical power or energy to municipal corporations which have heretofore entered, or may hereafter enter into contracts with the Commission for the supply of power from the Niagara River and from the Welland River. The operation of the works and delivery of power from the Queenston-Chippawa plant was commenced in January 1922, therefore, the

from the Toronto Power Company. The delivery of power over the System's lines commenced in 1910; by December 1911 the System serviced twenty-three municipalities, and at the close of the fiscal year ending October 31,1912, power was being furnished to one hundred and twenty-two municipalities, the Toronto Railway Company, by twenty-four Companies and others and to the Hydro System.

At the commencement of operations, the properties consisted of transformer stations, transmission lines and distributing stations, the power having been furnished by outside interests, as mentioned above. Under an Agreement, dated April 11,1917, the Commission acquired the equity stock of the Ontario Power Company of Niagara Falls, which Company owns the entire capital stock of the Ontario Transmission Company Limited. The properties of the Ontario Power Company comprise, in the main, a hydro-electric generating plant at Niagara Falls, and transmission stations, transmission lines, distributing stations and real estate, including rights-of-way. The properties of the Ontario Transmission Company include, transmission of transmission lines, distributing stations, etc., have been leased to the Toronto Power Company and are used by it in the transmission to its customers of electrical energy purchased at the Power Company's plant.

The consolidation of the Niagara-Dufferin Canal and system was undertaken by the Commission in 1917, under the authority of the Ontario Niagara Development Act of 1916 (6 Geo. V c.7), for the purpose of supplying electrical power of energy to municipal corporations under Hydro-Electric Systems, or any Municipal Public Utility Commission which the Commission has the supply of power from the Niagara River and from the Dufferin River. The operation of the Power and delivery of power from the Niagara-Dufferin plant has commenced in January,1921, therefore, the

Niagara System at the present time, may be said to embrace -

(1). The new Canal and the Generating Plant at Chippawa - Queenston.

(2). The Generating Plant, Transformer Stations, Transmission Lines, property, etc., which are controlled by the Commission through its ownership of the entire capital stock of the Ontario Power Company of Niagara Falls, and

(3). The Rights-of-Way, Transformer Stations, Transmission Lines, Distributing Stations, etc., constructed for the purpose of transmitting and distributing power to the various municipalities in the System, a list of which is attached (Exhibit VII).

The Niagara Rural Lines, which consist of primary or main lines, were constructed by the Hydro-Electric Power Commission of Ontario in order to provide electrical energy to rural customers adjacent to certain municipalities in the Niagara System, and the delivery of power commenced in the fiscal year ending October 31, 1913. The majority of these rural lines are operated by municipalities and townships, which collect the revenue and maintain the lines, paying the Commission for the power supplied, and interest and sinking fund provisions based upon the capital invested in the lines. These rural lines will become the property of the townships operating them, when the accumulated sinking fund payments are sufficient to repay to the Commission the investment in the lines. A list of the municipalities and townships operating rural lines is attached (Exhibit VIII). The remaining rural lines are directly operated by the Commission, which collects from the customers, the operating costs, represented by the charge for power, rural lines maintenance and operating expenses, reserve for renewals and

interest and sinking fund provisions on the cost of the lines, which at October 31,1921, were as below:

Customers	Cost of Line
Brady and Raymond	$ 817.18
Wm. Pullen	74.15
Innes, Karn & Longworth	2,875.20
W. G. Bailey	599.21
Port Dalhousie	5,834.33
South Dorchester Township	4,561.39
West Flamboro Township	9,040.93
Copetown District	3,265.11
Total	$ 27,067.50

Our comments on the accounts have been arranged according to the following main subdivisions:

Niagara System
Niagara Rural Lines
Farm Operations
Eventual Ownership of the properties.

NIAGARA SYSTEM

CAPITAL INVESTMENT:

As at October 31,1921, the investment in plant, equipment, etc., of the Niagara System aggregated $103,559,806.74 made up of -

Cost to date of Queenston-Chippawa Canal and Works	$58,018,366.89
Book value, including contracts, franchises, goodwill, etc., of the capital assets of the Ontario Power Company and its subsidiary, the Ontario Transmission Company, Limited, as shown by the balance sheet of the Ontario Power Company and its subsidiary	27,740,758.22
Transformer Stations, Transmission lines, etc.	17,800,681.63
Total	$103,559,806.74

The actual cost to the Hydro-Electric Power Commission of Ontario, of the capital assets of the Ontario Power Company and its subsidiary was $25,740,758.22, or $2,000,000.00 less than the book value stated above, the Capital Stock of the Company of a par value of $10,000,000.00 having been purchased for $8,000,000.00.

Inasmuch as the accounts have previously been audited, it has been considered unnecessary for us to investigate in detail the charges to the capital accounts and they have, therefore, been accepted as correct. Particulars of the expenditures, as indicated by the classification of accounts, were submitted to you on August 2, 1922.

We understand that the question of the cost of the Queenston-Chippawa Canal and Works is being investigated by Mr.Walter J.Francis, Consulting Engineer to the Hydro-Electric Inquiry Commission, to whom we have supplied reports and information upon this subject from time to time as requested. Copies of all such reports have been furnished to you. To meet the cost of the Queenston-Chippawa Canal and Works, the Province of Ontario advanced $53,040,674.52 up to October 31,1921, whereas the actual expenditures of $58,018,366.89 up to that date exceeded the advances by $4,977,692.37. The cash to meet the expenditures amounting to $4,977,692.37, was obtained from advances made by the Province for the purpose of other Systems operated by the Commission.

In our general report upon the accounts of the Hydro-Electric Power Commission of Ontario, we propose to deal with the question of the application of the advances by the Province of Ontario.

A separate report is being submitted by us relative to the accounts of the Ontario Power Company of Niagara Falls and its subsidiary the Ontario Transmission Company, Limited.

The following is a summary of the investment in the Transformer Stations, Transmission Lines, etc., of the Niagara System, as at the close of each fiscal year for the five years ending October 31,1921, (cents omitted):

Accounts	As at October 31				
	1917	1918	1919	1920	1921
Right-of-Way	$1,352,671	1,423.039	1,459,813	1,482,884	1,511,125
Steel Tower Lines	4,057,983	4,144,401	4,124,625	4,161,395	4,660,396
Transformer Stations	3,646,149	4,746,543)	5,790,871	6,295,833	8,533,621
Distributing Stations	357,527	546,530)			
Wood Pole Lines	2,291,759	2,441,656	2,457,978	2,553,241	2,619,114
	$11,706,089	13,302,169	13,833,287	14,493,353	17,324,256
Rural Power Distribution and Rural Lines Construction	453,443	481,288	473,085	475,666	476,426
Total	$12,159,532	13,783,457	14,306,372	14,969,019	17,800,682

NOTE:

The decrease of $19,776 in the Steel Tower Lines balance at October 31,1919 as compared with October 31,1918 is due to adjustment of the capital investment incident to restringing the line from Niagara Falls to Dundas, while the decrease during the same period, of $8,203 in respect of rural lines construction represents the book value of lines sold to certain municipalities.

ESTIMATES FOR ADDITIONAL FUNDS REQUIRED FOR CONSTRUCTION:

It has been estimated by the engineers of the Hydro-Electric Power Commission that additional funds of $4,712,000 and $2,795,000 will be required for the Niagara System Lines and Stations, in order to complete, during the fiscal years ending October 31,1922 and 1923, respectively work now in progress and for additional works, betterments and extensions to be undertaken during the current fiscal year. The more important of the estimates are for the following:

Description	Year ending October 31, 1922	1923
Queenston Transformer Station		
Additional payments on fifteen 15,000 K.V.A.transformers, also transformations share of 12,000 V. switching, high voltage switching, lighting arresters, mechanical equipment, etc., also transformations proportion of the station to be constructed in 1922	$ 1,810,000	
completion of superstructure for No.5 unit, etc. (1923)		$ 200,000
Queenston to Burlington, 2- 110 K.V.Circuits	1,000,000	
Further work in connection with the first trunk line from Queenston which will tap existing lines near Nelson		
With 250,000 more horse power available at Queenston several new lines will be required. The two lines proposed will handle 100,000 horse power and will connect with circuits on existing towers between Dundas and Toronto		
Hamilton Station	350,000	215,000
The City of Hamilton is now served from Dundas Transformer Station, an arrangement which has been satisfactory in the past, but on account of the great increase in demand in Hamilton, it will be essential that a high voltage station be constructed there. The power demand in Hamilton for 1922 is estimated at 25,000 horse power, and for 1924 at 40,000 horse power, whereas the present capacity of Dundas Station is 15,000 horse power and serves in addition to Hamilton the entire district, including Dundas, Watertown, Caledonia, Hagersville and Lynden		
110 K.V.Lines - Miscellaneous		
It is expected that the line from Queenston to St. Thomas and the line to Sarnia will be started next summer (1923)		1,000,000
Miscellaneous Estimates	1,552,000	1,380,000
To permit completion of works in course of construction, including that made necessary due to the construction of the Chippawa Canal, and to permit additional works, betterments and extensions to this System.		
Total per above	$ 4,712,000	$ 2,795,000

NOTE:

Complete details, of which the above are a part, may be obtained in respect of estimates for 1922, from "Estimates" and from "Further Supplementary Estimates" of the Province of Ontario for the fiscal year ending October 31,1922, printed by order of the Legislative Assembly of Ontario. (Votes No.113 and No.219 of 1922 and No.115 of 1923).

Estimates made by the engineers of the Hydro-Electric Power Commission of the additional funds required in connection with the Queenston-Chippawa Development are in respect of the following (included in Legislative Vote numbers 113,115 and 219 of 1922 and No.115 of 1923):

Description	Year ending October 31 1922	1923
Electrical Generation - Additional payments on contracts for five main generating and two service units, also on switching service and mechanical equipment for screen house superstructure and the development's share of the generating station on superstructure to be constructed in 1922 and 1923 preliminary engineering on subsequent units,etc.	$ 2,500,000	$ 345,000
Hydraulic Construction - Payments covering cost of excavation on earth section of Canal and Chippawa River, including intake at Chippawa screenhouse, pen stocks, power house, hydraulic machinery and miscellaneous, together with necessary equipment for the installation of five turbines of 55,000 horse power capacity, and accessories; also such construction plant as may be necessary to complete the work, materials, labour, cement, stores, etc; tests on all units and preliminary engineering for subsequent units, etc.	5,500,000	955,000
Total -	$ 8,000,000	1.300,000

A summary of estimates of additional funds required as at October 31,1921 for the Niagara System and Niagara Rural Lines, for the fiscal years ending October 31,1922, and 1923 are as follows:

	Year ending October 31 1922	1923
For the Niagara System, Lines and Stations	4,712,000	2,795,000
For the Queenston-Chippawa Development	8,000,000	1,300,000
For the Niagara Rural Lines (described later in this report)	1,000,000	750,000
Total	$13,712,000	$4,845,000

It is recommended that a report upon these estimates should be made by Mr. Walter J. Francis.

OPERATING ACCOUNTS:

The operating account of the Niagara System for each of the four years ending October 31,1918 to 1921 inclusive is attached hereto,Exhibit I and is in turn supported by Exhibits I-a and I-b, which show further details of operating expenses. For convenience of reference the following brief summary of the operating results for the four years, subdivided according to municipalities and companies (cents omitted) is given:

Particulars	Year Ending October 31 1918	1919	1920	1921
MUNICIPALITIES:				
Revenue (per operating account)	$2,247,495	2,535,979	3,180,161	3,542,028
Operating Cost, including power purchased	1,472,346	1,655,046	2,189,759	2,512,524
Fixed Charges	775,149	880,933	990,402	1,029,504
Total Expenses	$2,247,495	2,535,979	3,180,161	3,542,028
Balance	Nil	Nil	Nil	Nil
COMPANIES:				
Revenue (per operating account)	$ 483,547	534,131	570,905	750,466
Operating Cost, including power purchased	$ 300,179	368,326	361,644	555,520
Fixed Charges	149,225	185,488	198,047	211,015
Total Expenses	$ 449,404	553,814	559,691	766,535
Balance transferred to Contingent Reserve	$ 34,143	19,683	11,214	16,069
TOGETHER (per operating account)				
Operating Cost, etc.	$1,772,525	2,023,372	2,551,403	3,068,044
Fixed Charges	924,374	1,066,421	1,188,449	1,240,519
Combined Totals	$2,696,899	3,089,793	3,739,852	4,308,563
PERCENTAGE OF FIXED CHARGES TO TOTAL EXPENSES:				
For Municipalities	34.49%	34.74%	31.14%	29.07%
For Companies	30.86%	33.49%	35.38%	28.12%
Combined	34.27%	34.51%	31.77%	28.79%

It will be noted that the profit or loss since October 31,1917 resulting from sales of power to private Companies, has been transferred to the Contingent Reserve. The profit or loss for those four years, amounting to a profit of $9,605. (Net), is shown separately for each year in the statement above.

By reference to the above summary it will be seen that the municipalities were charged with the cost of the power and the distribution thereof, and with that proportion of the fixed charges which pertained to the power supplied while the power sold to companies was charged with its proper proportion of operating expenses and fixed charges. As regards power sold to companies prior to October 31,1917, we quote from the audit report of that period by Mr. G. T. Clarkson, as follows:

> "To 31st October,1917, a net profit of $178,842.31 was earned by the Systems from power sold to corporations other than municipal ones. Of this amount the profit, $117,369.21, for the period ending 31st October,1916, was applied in reduction of the maintenance cost to be met by municipal corporations under contract with the Commission, and the profit, $61,473.10, for the fiscal year ending 31st October,1917, was applied to the Contingency Reserve".

The operating results shown above are those stated in the published accounts of the Commission. Adjustments in the accounts have been found necessary from time to time, applicable to prior periods. In view of the fact that the records are maintained on a cost basis - there being no surplus or deficit account - charges or credits giving effect to any adjustments are passed direct to the accounts of the respective municipalities concerned, and not through the Operating Account of the period in which found. The adjustments made in the accounts of the Niagara System applicable to operations were not of sufficient importance to materially affect the figures used in the operating accounts.

The names of the more important Companies and others to whom power was sold under contract, during the past four years, the amount of revenue therefrom, and the average rate per horse power, are given below (cents omitted from the total amounts):

Account	Fiscal year ending October 31 1918 Amount	1918 Per H.P.	1919 Amount	1919 Per H.P.	1920 Amount	1920 Per H.P.	1921 Amount	1921 Per H.P.
Baldwin's Ltd.	-	-	-	-	28,906	18.64	54,652	16.50
Canadian Salt Co. Ltd.	54,958	35.24	70,404	35.85	85,784	37.49	70,824	39.68
Galt, Preston & Hespeler Railway	22,155	24.29	21,922	23.37	23,828	26.37	24,267	25.00
Lake Erie & Northern Rly. Brant	16,180	19.95	16,984	21.36	19,000	23.06	17,649	23.30
Simcoe	10,450	20.00	11,066	18.06	11,842	20.35	12,530	19.95
St.Mary's Cement Ld.	41,646	31.00	51,771	31.00	58,475	31.00	65.905	31.00
Shale Brick Co.Ltd.	-	-	6,907	25.13	19,464	25.00	18,643	26.29
Union Carbide Co.	267,481	14.00	221,508	14.00	119,132	7.45	207,536	12.86
Essex System *	-	-	14,451	32.84	29,895	30.76	34,875	32.01
Niagara Power Development-								
Chippawa	-	-	-	-	3,141	11.78	6,248	16.72
Montrose	-	-	-	-	20,733	11.78	71,698	12.52
Whirlpool	15,000	9.98	66,164	11.05	91,557	12.23	101.810	13.61
Sundry Companies	55,677	-	52,954	-	59,146	-	63,829	-
Total	$483,547	-	534,131	-	570,905	-	750,466	-

The Niagara Power Development and the Essex System were charged for power on a cost basis.

(*) Represents power sold at cost.

The contract of the Commission with the Union Carbide Company, Limited, excerpts from which are attached, provides among other things that power shall be paid for at the rate of $14.00 per horse power whereas, it will be noted from the above that $7.45 and $12.86 were charged for power in 1920 and 1921 respectively. This variation from the terms of the contract was due to a separate supplemental arrangement made with the Company by the Commission to supply power at the rate of 555/1000 of a cent per kilowatt hour during the period of the Commission's power shortage, with the understanding that the Company would not take power during the peak-load periods. This arrangement became effective January 1,1920 and remained in force until May 1,1921, at which time the Company was again supplied with

power under the terms of its contract.

During the four fiscal years ending October 31,1921, the cost of purchased power increased from $1,385.000 in 1918 to $2,412,000 in 1921, in connection with which the following is submitted (cents omitted from the total amounts):

Year ending Oct.31	Ontario Power Co.		Canadian Niagara Power Co.		Sundry Items	Total
	Amount	Per H.P.	Amount	Per H.P.	Amount	Amount
1918	$821,806 12,024	9.00 12.00	$539,643	12.00	$ 12,233	$1,385,706
1919	851,875 41,939	9.00 12.00	598,597	12.00	25,047	1,517,458
1920	870,482 242,336	9.00 12.00	584,683 130,937	12.00 18.00	137,866	1,966,304
1921	873,295 140,250 607,875	9.00 12.75 18.00	597,231	12.00	193,314	2,411,965

Included in the sundry items in the summary above are the following which, may, with propriety, be charged to the cost of power:

Year ending October 31,1918 -

Arbitrators award re supply of power during year 1916 - Toronto Power Company	$ 6,942.45
Ontario National Brick Company 1917-1918, power recharged	4,995.91
Canadian Niagara Power Company - amount paid for damages to machinery	295.22
Total	$ 12,233.58

Year ending October 31, 1919 -

Payment to Canadian Niagara Power Co. in settlement of all outstanding claims on account of damage to equipment and loss of revenue consequent upon such damage	25,000.00
Legal fees	47.00
Total	$ 25,047.00

Year ending October 31, 1920, -	
Amount charged to cost of power arising from adjustment of Union Carbide Company contract as a result of the agreement entered into	$ 69,204.09
Electro Metals Co., amount paid for release of 11,000 H.P. (9 mos. @ 7.25 per H.P.year) difference between amount paid by this company to an outside company, and the price at which, under contract it was entitled to receive that quantity of power from the Hydro-Electric Power Commission	59,812.47
Amount charged re reactor protection	6,310.05
Miscellaneous	2,539.01
Total	$ 137,865.62
Year ending October 31,1921 -	
Amount charged to cost of power arising from adjustment of Union Carbide Company contract as a result of the agreement entered into	$ 105,257.32
Electro Metals Co., release of 11,000 H.P. @ $7.25, difference between amount paid by this Company to an outside company, and the price at which, under contract it was entitled to receive that quantity of power from the Hydro-Electric Power Commission	79,749.96
Toronto Hydro-Electric System Power purchased for resale to Markham and Scarboro Townships (220 H.P.)	6,206.87
Canadian Niagara Power Company - amount written off reactor protection	2,100.00
Total	$ 193,314.15

Since statistics with reference to the operations are being prepared by Mr. Walter J. Francis we have been instructed by your Commission to not compile any information along these lines so as to avoid duplication of work. In the circumstances we are not in a position at this time to present for the various years a comparison of operating costs per unit of power with the view of bringing to your attention in this manner variations in costs which might prove sufficiently important to warrant further investigation.

RESERVE FOR RENEWALS:

In accordance with the provision contained in Section 6, paragraph c of the Power Commission Act, whereby the Commission is empowered to provide for the renewal, reconstruction, alteration and repair of the properties operated by it, a Reserve for Renewals Account has been established, which at October 31,1921, showed a balance of $2,222,365.90. A summary of the Reserve setting forth the charges allocated against the municipalities and private companies to which power is supplied, and the charges against the Reserve on account of renewals, replacements, etc., is shown on Exhibit III, attached hereto.

The additions to the Reserve for Renewals on the Niagara System are provided through inclusion in the cost of power each year of an amount equivalent to 2½% on the capital investment of the system, exclusive of right-of-way, together with interest at 4% on the credit balance in the account at the close of the preceding year. Charges against the Reserve consist of expenditures on account of renewals, replacements, etc.

This method of providing additions to the reserve, known as the Sinking Fund basis, is equivalent to a renewal rate of approximately 4% per annum on the so-called "straight line basis", that is to say, while the amount of the annual provisions under the Sinking Fund method increase each year through interest accumulations and those under the straight line method remain constant, the amounts accumulated by either method would be approximately the same at the end of a twenty-five year period.

The annual rate of 2½% for renewals was determined in 1917, on the basis of reclassification of the properties of the System at October 31,1916, made by the Engineering Department of the Commission. This reclassification showed the estimated life, residual value, etc., as set forth in Exhibit IV. This rate has continued in force to October 31,1921, and the reserve as constituted at that date has been

computed upon the same basis from the beginning of operations in November,1911.

For the purpose of the property accounts, however, this re-classification was not adopted, and at the present time the capital assets appear in the books under two classifications -

First, The original classification in respect to expenditures up to 1st November,1920.

Second, The present classification which was established as of 1st November,1920, and is in accordance with the general practice of Public Service Corporations in the United States.

It is obvious, of course, since additions have been made to properties, that the same ratios of investment in buildings, equipment, etc., to the total depreciable properties as given in Exhibit IV would not necessarily obtain in all years. In view of the possibility of the condition varying, consideration should be given to the revision of the rates when the necessity arises.

RESERVE FOR SINKING FUND:

Under Section 23, paragraph (b) of the Power Commission Act, the Hydro-Electric Power Commission is required to provide "an annual sum sufficient to form in thirty years, with interest at four per cent. per annum, a sinking fund for the repayment of the advances made by Ontario under this Act for the payment of the cost of the works", and under paragraph (2) of the same Section "a municipal corporation which has entered into or shall hereafter enter into a contract with the Commission for a supply of power may be relieved by the Commission from payment of any sum on account of the sinking fund account for the first five years, during which payments are made to the Commission by the corporation under such contract, and the amounts required from such corporation on sinking fund account shall be payable during the then next ensuing thirty years".

The basis for ascertaining the amount of the reserve for sinking fund each year is, for the Niagara System Lines and Stations, the capital cost of the transformer stations and transmission lines, etc., completed and in operation. The method used by the Commission in calculating the amount of the reserve is as follows:-

> The annual sum sufficient to form in thirty years, with interest at four per cent. per annum, the amount of capital invested. This sum is equivalent to an annual rate of 1.8% of the principal invested.
>
> The capital investment of the respective sections of the Lines and Stations is distributed to the municipalities and others receiving power therefrom in the proportion that the horse power furnished each customer bears to the aggregate horse power furnished all customers on these sections of the lines.
>
> The rate of 1.8% is applied to the principal so determined, proper allowance being made for any units of plant in operation less than a year.
>
> The portion of the reserve, determined as outlined inthe foregoing, applicable to municipalities in operation for a period of six years or longer, is included each fiscal year in the cost of power furnished the respective municipalities. For such municipalities as may not have been in operation for that period the sum apportioned against the municipality in its first year and deferred, is included inthe cost of power in sixth year of operations, etc.

As permitted under the Act, the collection of the sinking fund was deferred for a period of five years in the cases of all municipalities in this System. From the respective dates the collections were started, to October 31,1921, the sums provided, by inclusion in power costs to municipalities and sundry companies during each fiscal year, together with interest, are set forth in detail on Exhibit V. The following summary has been made from that Exhibit:

Balance at credit of Sinking Fund as at October 31, 1916		$ 74,708.45
Amounts included as part of the cost of power in five fiscal years, ending October 31, 1921:		
To Municipalities	$ 629,781.67	
To Companies	178,440.66	808,222.33
Interest at 4% per annum		73,158.61
Miscellaneous -		
Credits	$ 2,222.26	
Charges	593.76	1,628.50
Balance as at October 31,1921		$957,717.89

Of the total amount of $957,717.89, as shown above, $670,525.56 and $287,192.33 were credited as being applicable to municipalities and to companies respectively. Reference is made later in this report to the application of the sinking funds, under the caption of Eventual Ownership of the Property.

The above shows the aggregate amount of the sinking fund collectible at October 31,1921, from 79 municipalities which have taken power for six years or longer the initial charge in each case being made in the sixth year's power cost. The sinking fund charges deferred at October 31,1921, amounted to $323,102.31, representing deferments, as permitted by the Act, for a period of from one to five years, in respect of 100 municipalities. In this connection it may be stated that of the 123 municipalities, etc., inthe Niagara System as at October 31, 1921, 23 municipalities had paid all charges against them, while 44 municipalities had made no payments into the sinking fund, as the five year period had not expired. Sinking fund instalments, as applicable to the respective municipalities had not, at October 31,1921, been deferred beyond the period permitted by the Power Commission Act.

Included in Mr. G. T. Clarkson's audit report on the accounts of the Hydro-Electric Power Commission of Ontario, for the year ending October 31,1921, is a statement entitled:

> "Statement showing the total sinking fund requirements to be met by each municipality; sinking fund requirements, the payment of which has been deferred by the Commission under Section 23 of the Act; sinking fund payments made by certain municipalities which have been operating more than five years, and the total of such sinking fund payments, including interest allowed thereon to 31st October,1921". (Schedule No.27)

It is suggested that the statement above referred to should be carefully perused since it shows the position of each municipality with regard to the Sinking Fund against the stations and lines of the Niagara System.

During the fiscal year ending October 31,1921, there was included in the operating cost of the Ontario Power Company, provisions for Sinking Fund in respect of the following:

Particulars	Amount
On $8,000,000 debentures issued by the Commission as consideration for the capital stock of the Ontario Power Company, the sinking fund being based on the remaining life of the debentures, i.e., 37 years, with interest at 4% per annum	$100,000.00
On $3,200,000 bonds (due 1941) issued by the Commission to retire the debentures of the Power Company due in 1921. The Sinking Fund is being provided at the rate of 1% per annum, equivalent on a 4% basis to approximately 41 years, the reserve for Sinking Fund, from July 1,1921 (the date of the Bonds) to October 31,1921, amounting to	11,309.59
On cash advances for the construction of the Third Pipe Line. The amount of this reserve is equivalent to 1.8% per annum of the sum advanced	63,271.71
Total	$174,581.30

The question as to the adequacy of these provisions is more fully discussed inthe report onthe accounts of the Ontario Power Company of Niagara Falls.

Since the Queenston-Chippawa Development was not completed as at October 31,1921, the municipalities and companies being served by the Niagara System were, of course, not required to provide through inclusion in power cost, any amounts in respect of sinking fund to amortize the cost of the canal and works. As the sinking funds of the various systems are not invested separately, the whole question of the investment of these funds will be dealt with in our general report.

RESERVE FOR CONTINGENCIES:

The reserve for contingencies was established by the Commission for the purpose of providing for special losses or expenses not arising at regular intervals and not wholly applicable to the period in which

incurred. In this connection the Power Commission Act provides as follows:

> "The Commission may set apart out of the moneys coming to its hands from time to time from any municipal corporation, railway company, or distributing company, such sums as may be sufficient in the opinion of the Commission to provide for the renewal, reconstruction, alteration and repair of the works constructed and operated by the Commission, and to meet any unforeseen expenditure caused by the destruction or injury of any such works". (Section 14, paragraph b of Act).

The provision for contingencies, in respect of the Niagara System, is made up of -

(a). An annual charge of $37,500., included as part of the cost of power delivered to municipalities and to sundry customers,

(b). The net profits resulting from the sale of power to sundry customers,

(c). Profit from sales of miscellaneous materials, etc., and

(d) Interest at four per cent. per annum on the monthly balances.

The sum provided from the opening of the account in 1917 to October 31, 1921, and the charges thereagainst for that period are set forth on Exhibit VI. The following is a brief summary, taken from that Exhibit, for the five years ending October 31,1921:

Amounts included as part of the cost of power delivered		
To Municipalities	$151,685.07	
To Sundry Customers	35,674.25	$187,359.32
Net profit from sale of power to sundry companies		78,932.96
Net profit on sales of aluminum cable, sundry equipment, etc.		7,645.80
Miscellaneous material recovered, previously charged to construction, operations, etc.		22,097.90
Interest at 4% per annum		9,314.90
Total credits		$305,350.88
Deduct - Expenditures to cover contingencies met with		280,475.87
Balance as at October 31,1921		$ 24,875.01

On page 2 of Exhibit VI-a have been shown the more important expenditures charged against the reserve, the information in connection therewith having been obtained from work orders, correspondence files and the accounting records of the Commission. The items listed on this Exhibit were inquired into by us and we are satisfied as to the propriety of the charges.

The policy adopted by the Commission of providing a reserve for contingencies is, we believe, sound. Giving consideration to the extent of the properties and the probability of losses and expenses arising from storms, accidents or other unforeseen conditions, we would recommend that a substantial reserve be built up. The amounts of the losses of a contingent character, actually incurred in the past four years are as follows:-

Year ending October 31,	1918	$135,140.70
" "	1919	70,840.96
" "	1920	43,576.64
" "	1921	30,917.57

From the foregoing, we are of the opinion that a reserve of a substantial amount should be built up over a reasonable period of time, through inclusion in the cost of power to municipalities and others.

ACCOUNTS WITH MUNICIPALITIES:

Accounts with municipalities are divided by the Commission, in the main as follows:

Power Accounts Receivable
Due by or to Municipalities in respect of the cost of power furnished them, as determined under the Power Commission Act.

Power Accounts Receivable:

These accounts represent unpaid balances in respect of interim power bills rendered. As at October 31,1921, the power accounts

receivable from municipalities and others amounted to $476,448.68 and as at September 20,1922, the date inquired into by us, with the exception of accounts aggregating $4,399.87, all these accounts had been paid. Following is a list of the unpaid accounts:

Account	Balance Oct.31,1921	Amount Overdue	Comments
Dunville	$1,925.69	$ 933.03	Increased assessments January to April,1920, and January to April,1921
Goderich	2,850.77	1,010.94	Increased assessment January to April,1921
C.W.McFarlane Engineering Co.	304.59	245.90	Balance of account, April to June,1921.
Municipality of Welland	6,399.92	2,160.00	Balance of October 1921 power bill
Total		$4,399.87	

These balances, upon which interest is being charged at the rate of 7% per annum, are said to be good and collectible.

In addition to the above, the Baldwin's Canadian Steel Corporation has made payments of round sums, aggregating $17,500, on account of the October 31,1921, balance of $8,773.03, and subsequent charges for power amounting to $48,620.92, but the Accountant of the Commission has informed us that any claim which this Company may have against the Commission will not be important in amount. Conferences relative to this account are at present being held between representatives of the two parties.

Due by or to Municipalities in Respect of the Cost of Power:

At the close of each fiscal year, the interim power bills rendered monthly are adjusted to meet the operating costs of the System, determined as provided for in Sections 6 c and 23 of the Power Commission

Act. A list of the balances due by or to municipalities, as at October 31,1921, is given on Exhibit VII, attached hereto. Following are the amounts of the adjustments required of interim bills rendered each year, for the four years ending October 31,1921, (cents omitted):

Particulars	Fiscal Year ending October 31			
	1918	1919	1920	1921
Amounts due by certain Municipalities being the excess of the cost of power over the sums charged therefor during the period	$27,642	172,756	224,259	185,910
Deduct - Amounts due to certain Municipalities, being the excess of the sums charged for power furnished, over the cost of power during the period	231,808	109,288	111,578	109,881
Net amount due by or to certain municipalities, based on the adjustment of costs as provided for by the Act	$204,166	63,468	112,681	76,029

As the result of the charges or credits, such as the above, as at October 31,1921, as shown on Exhibit VII, 63 municipalities had credit balance aggregating $207,815.60, representing overpayments, interest allowances thereon, etc., 59 municipalities had debit balances aggregating $190,814.41, representing underpayments, interest charges thereon, etc., and one, S. Dorchester Township, had no balance.

For the purpose of ascertaining the length of time the debit balances included in the sum of $190,814.41 (as shown by the attached Statement) were outstanding, we obtained from the Accountant of the Commission, and have attached hereto (Exhibit IX), a statement which shows in respect of the account due by each municipality at October 31, 1921, the credits by cash or other sources applied in reduction of such balances during the period from October 31,1921, to September 20,1922 and if not fully paid, the period, by fiscal years, over which the

balance extends. With reference to amounts credited during this interval, the following is given:

Particulars	Number of Municipalities	Balance October 31 1921	Amounts Credited Since October 31 1921
Accounts partly paid	8	$ 29,614.03	$ 11,043.28
Accounts with no credits	14	26,201.55	-
Total per Exhibit IX	22	55,815.58	11,043.28
Accounts fully paid	37	134,998.83	134,998.83
Total	59	$190,814.41	$146.042.11

We would direct your attention to the information presented on Exhibit IX. In explanation thereof, we would state that the balances as at October 31, 1916 represent accumulations of from one year to five years "thirteenth" power bills rendered, as indicated under the caption of "years". The charges or credits are, except for cash payments marked (c), in respect of adjustments of the interim power bills to the actual cost of power, determined under the provisions of the Power Commission Act. The interest on debit or credit balances is calculated at the rate of 4% per annum.

With reference to the extension of the time for payment of accounts by municipalities, the Power Commission Act provides as follows:

> "The Commission may from time to time during the first three years after any municipality shall first begin to take power from the Commission extend the time for payment of the sums payable by any municipality or any part thereof, and such municipality shall pay to the Commission interest onthe amount which may be in arrear, or for the payment for which time is extended until the payment thereof, at such rate not exceeding seven per cent. per annum, as the Commission may determine. (Section 23-a of the Act).

The Accountant of the Commission is submitting to you in accordance with your request a list of rates and power loads in respect of each municipality receiving service, from the commencement of service

to October 31,1921, the latest date upon which the annual adjustment of the interim estimated rates was given effect to on the books. The accounting methods used by the Commission in arriving at the rates as between the various municipalities and other customers are fully explained in the general report dealing with the accounting system.

GENERAL:

While all contracts in force in connection with the operation of the Niagara System have not been examined by us, we have perused several of them and we have attached to this memorandum the following Exhibits, which contain excerpts of the more important features relative to accounting matters:

Excerpts from Agreement for Electrical Power:

Exhibit X - With Municipalities in Niagara System

" XI - With Private Company in Niagara System

" XII - With Municipality classified under Niagara Rural Lines

NIAGARA RURAL LINES

CAPITAL INVESTMENT:

As at the close of each fiscal year for the five years ending October 31,1921, the investment in the Niagara Rural Lines is subdivided as follows (cents omitted):

Particulars	As at October 31,				
	1917	1918	1919	1920	1921
Primary and main lines owned by the Commission but operated and maintained by municipalities owning secondary or service lines tributary thereto	$335,169	448,068	452,684	442,415	434,482
Rural Lines operated by the Commission	41,211	20,204	20,401	20,062	27,068
Lines under construction	77,063	13,016	-	13,189	14,876
Total	$453,443	481,288	475,085	475,666	476,426

Rural Lines serving Breslau and Petersburg-St. Agatha at October 31,1917, were transferred to the Niagara System in the year ending October 31,1918, for the reason that the new arrangement with these municipalities called for power at cost, which could not be carried out while these municipalities were treated as Rural Lines.

During the fiscal year ending October 31,1919, the Capital Assets were reduced by $8,202.15 on account of certain lines sold to municipalities. During the fiscal year ending October 31,1920 $24,820.42 was expended on Rural Lines in the vicinity of Walkerville, St. Catharines, Agincourt and at several other places while the primary line from Toronto to Markham, costing $22,240.31, was transferred to the wood pole lines account of the Niagara System, resulting in a net increase in capital investment for the year of $2,580.11.

The lines inthe Township of York were disposed of in 1921 to that municipality, at the cost value of $50,455.82 at which those assets were carried on the books, and this sum deducted from the amount of $51,215.31 expended during the year, on existing rural lines and new rural power districts left a net addition for the period of $759.49.

It has been estimated by the engineers of the Commission that additional funds of $1,000,000 and of $750,000 will be required for the Niagara Rural Lines during the fiscal years ending October 31,1922 and 1923 respectively, in respect of expenditures to be made on account of rural distribution in townships already under application, including extensions to districts where work was under way in 1921 and for the establishment of new districts.

Mr. Clarkson states in his October 31,1921 report on the accounts that "No advances were made by the Province up to October 31,1921, under the provisions of the Rural Hydro-Electric Distribution Act of 1921".

RESERVE FOR RENEWALS:

Additions to the Reserve for Renewals in respect of Rural Lines operated by the Commission at its own risk are provided by an annual charge of 4% on the capital invested, with interest added thereto in in each year at the rate of 4% on the balance in the account at the close of the preceding year. This method of provision, which is equivalent to a renewal rate of approximately 5¾% per annum, on the so-called "Straight line basis", would replace the amount of capital investment being reserved for in about 18 years.

No provision for renewals in respect of Rural Lines constructed at the cost of the Commission and operated by municipalities has been made in the accounts of the Commission, since, under the terms of their accounts, such municipalities are required to set aside a renewal fund at the rate of 5% per annum on all capital expenditures by the Commission on lines of primary voltage. The funds thus set aside are retained by the municipalities, against which are charged any expenditures made by them for renewal of properties of the Commission, which they operate.

A summary of the Reserve for Renewals of the Niagara Rural Lines is as follows:

Period	Annual Provision of 4%	Interest at 4%	Together
1912 to October 31, 1916	$ 2,669.74	53.17	2,722.91
Year ending October 31, 1917	1,198.35	108.92	1,307.27
" " " 1918	787.71	139.30	927.01
" " " 1919	835.44	159.14	994.58
" " " 1920	811.76	198.92	1,010.68
" " " 1921	896.59	239.34	1,135.93
Total Credits	$ 7,199.59	898.79	8,098.38
Deduct			
Portion of Reserve applicable to equipment transferred from System		$ 978.77	
Cost of renewing and replacing equipment	$ 679.70		
Interest applicable to above charges	83.54	763.24	1,742.01
Balance as at October 31, 1921			$ 6,356.37

RESERVE FOR SINKING FUND:

The Commission is required under the Power Commission Act to provide "an annual sum sufficient to form in thirty years, with interest at four per cent per annum, a sinking fund for the repayment of the advances made by Ontario under this Act for the payment of the cost of the works".

The balance in the account of the reserve for sinking fund at the close of each fiscal year is as follows:

Period	Balance
October 31, 1917	$ 19,547.66
" 31, 1918	28,067.39
" 31, 1919	36,456.61
" 31, 1920	46,809.11
" 31, 1921	50,607.68

Of the total sinking fund of $50,607.68 at October 31,1921 $48,577.16 is in respect of lines which will eventually become the property of the townships in which they are operated, and $2,030.52 is in respect of eight lines operated by the Commission at its own risk. No portion of the sinking fund for Niagara Rural Lines stood deferred at October 31,1921.

Balances aggregating $20,653.53 were due in respect of sinking fund and interest accounts on rural lines, as at October 31,1921. Accounts amounting to $3,631.54, which were three months or more overdue as at that date, are listed below:

Municipalities	Balance Oct.31,1921	Comments
Grantham Township	$ 1,883.80	Paid $941.90 on account in 1922; balance said to be collectible
Sunderland	154.40	Paid May 25, 1922
Vaughan Township	1,593.34	Still outstanding at September 20,1922, Represents two power bills October 1920 and May 1921 said to be collectible.
Total	$ 3,631.54	

OPERATING ACCOUNTS:

The operating account of the Niagara Rural Lines for the four years ending October 31,1921, is attached hereto, Exhibit II, and the following summary has been prepared from that Exhibit (cents omitted):

Particulars	Year ending October 31,			
	1918	1919	1920	1921
Municipalities operating at risk of Commission -				
Revenue	$ 3,542	3,915	4,522	5,328
Expenses:				
Operating cost including power purchased	1,953	2,227	3,029	3,191
Fixed charges	1,939	1,998	1,968	2,318
Total Expenses	$ 3,892	4,225	4,997	5,509
Balance - Loss	$ 350	310	475	181
Municipalities not operating at risk of Commission -				
Revenue	$103,605	83,443	90,770	93,124
Expenses:				
Operating cost including power purchased	$ 73,509	51,709	59,238	64,012
Fixed Charges	30,096	31,734	31,532	29,112
Total Expenses	$103,605	83,443	90,770	93,124
Balance	$ -	-	-	-

Of the municipalities operating and maintaining the lines held under trusteeship by the Commission, sufficient charges were made against them to cover sinking fund and interest, and also the cost of power in the case of five of them, which were charged direct with the cost of power furnished. Those not charged direct by the Commission with the cost of power, receive power from, and make payment therefor, to municipalities to which they are adjacent. The lines operated by the Commission at its own risk showed a deficit each year for the four years ending October 31,1921, although from the commencement to

October 31,1921, the operation of these lines resulted in a surplus of $1,590.47.

As at October 31,1921, of the thirty-three municipalities and townships operating lines on their own account, twenty-nine had neither debit nor credit balances, and four had credit balances aggregating $1,022.31, representing accounts payable to them by the Commission. Of the eight lines operated at the risk of the Commission, seven lines showed a surplus of $2,323.96, and one line a deficit of $733,49, or a net surplus from operations of $1,590.47, mentioned above, which latter amount represents a surplus account in the balance sheet of the Commission.

FARM OPERATIONS.

In securing rights-of-way for the Queenston-Chippawa Development approximately eight hundred acres of adjoining farm lands, we were informed, were acquired. The Commission undertook to lease or operate these lands for the purpose of keeping them under cultivation and in a saleable condition with a resulting loss from operation of $109,123.42, sustained in the following years:

Period	Amount
Year ending October 31,1918	$ 18,995.93
" " October 31,1919	53,408.63
" " October 31,1920	19,788.71
" " October 31,1921	16,930.15
Total	$109,123.42

The loss for the year 1918 in the amount of $18,995.93 as above, was deducted from the surplus resulting from the operation of the service departments, whereas, the loss for the years 1919, 1920

and 1921, aggregating $90,127.49, has been included as a part of the cost of the Queenston-Chippawa Power Development.

We have been informed by a representative of the Commission that farming operations have been materially curtailed and that it is the intention to dispose of these lands as soon as possible and apply the proceeds thereof in reduction of the cost of the Queenston-Chippawa Power Development. In this connection, Mr. G. T. Clarkson in his audit report on the accounts of the Hydro-Electric Power Commission of Ontario for the year ended October 31, 1919, states: "To the extent that such farming operations exceeded those necessary to maintain the properties in condition favourable for sale, the authority of the commission to conduct them was questionable".

EVENTUAL OWNERSHIP OF THE PROPERTY.

Section 23 of The Power Commission Act defines the charges to be made by the Commission to Municipal Corporations to which power is sold, and provides among other things for the inclusion of -

> "An annual sum sufficient to form in thirty years with interest at four per cent per annum a sinking fund for the repayment of the advances made by Ontario under this Act for the payment of the cost of the works".

Furthermore, it appears clearly to have been the intention that the annual sinking fund provision should be derived rateably from all users of power, whether municipal or other since with reference to municipal corporations the following language is used in the section referred to -

> "the corporation shall annually pay to the Commission its proportion as adjusted by the Commission"

It is our understanding that expenditures on the Queenston-Chippawa Power Development have been made under the authority of

The Ontario Niagara Development Acts of 1916 and 1917. In making provision for recouping the cost of capital outlays, the 1917 Act provides in Section 5 (2) for charges for -

> "the amount required for payment of interest on the sums expended by the Commission upon the construction and equipment of the works, and to form a sinking fund sufficient to provide for the repayment of such amounts and to provide renewals and such other charges as the Commission may deem necessary and proper".

While the Power Commission Act makes definite provision for the sinking fund on a thirty year basis, the Ontario Niagara Development Act does not specify the sinking fund period and it would therefore appear optional to adopt a longer period than thirty years for absorption of the cost of the Queenston-Chippawa Development. On the assumption that some latitude exists in fixing the sinking fund period in connectionwith the Queenston-Chippawa Power Development it will be of interest to note that on an expenditure of say $70,000,000.00 the annual sinking fund provision ona 4% basis would be $1,248,100.00 for thirty years, as compared with $458,500.00 for a fifty year period. Based on an assumed production of 450,000 horse power the annual sinking fund provisions onthe above basis as to capital expenditure would amount to $2.75 per horse power for thirty years as compared with $1.02 per horse power for fifty years.

When through the operation of the sinking funds, all advances by the Provincial Government and the bonds outstanding have been paid title to the entire properties will be vested in the Commission as Trustee for the respective municipalities which have, in the interim, purchased and consumed the power generated. Looking forward in anticipation of this result, the question appears pertinent at this time as to what the proportionate interests of the various municipalities in the properties will be or, in what manner these

interests may not equitably be determined.

Payments into the sinking funds with interest accretions for retirement of the obligations are equivalent to, and have the effect of depreciation provisions resulting in amortization of the total property costs in the sinking fund period. The sums payable into the sinking fund are derived as follows:

1. By direct charges to consumers in respect of the costs of transmission lines and transformer stations, and

2. By inclusion in the unit costs per horse power in respect of the costs of the generating plants or works.

All companies purchasing power from the Commission contribute rateably with the municipalities to the sinking funds in accordance with the quantities of power they respectively use, but the consumers other than municipalities do not acquire any equity in the property and may therefore for the present purpose be disregarded.

Direct charges to municipalities for sinking funds relate solely to transmission lines and transformer stations and as the amounts directly contributed are being annually accumulated by municipalities it is a relatively simple matter to ascertain at the end of any year the percentage of ownership of any municipality in the distribution line serving it with power.

Schedule 27 of Mr.G.T.Clarkson's report on the accounts of the Commission for the fiscal year ending October 31st,1921, shows the allocation to municipalities and to companies of the sinking fund

accumulations to that date in respect of transmission lines and transformer stations. The fund of $957,717.89 is allocated to separate municipalities to the extent of $670,525.56 while the balance of $287,192.33 is attributed to companies and remains undistributed.

The plan of not apportioning to the municipalities the sinking fund contributions made by companies appears sound since it is anticipated that from time to time power lines serving companies may be abandoned before expiration of the sinking fund period. In this event the amounts accumulated in the reserve from charges to companies, will serve to offset the losses representing capital cost in excess of such specific provisions for depreciation as may be made to the dates of abandonment.

Additions to the sinking funds on account of the generating plants, or works, are not analyzed or tabulated by sources, and the figures are therefore not assembled which would show the total amounts contributed to these funds by each municipality in the unit charges for power and the resultant cumulative equity in the property.

No suggestion is made that any change should be effected in the method of treatment in costs of these sinking fund charges, as the plan of apportioning the amounts applicable to the generating plants on the basis of units of horse power is considered to be as equitable as could be adopted.

However, we would suggest that each year concurrently with, or immediately following the preparation of the annual adjusted power bills, calculations should be made of the actual amounts of sinking fund charges included for the year in direct costs of power billed to each municipality representing the provisions in respect of the generating plants and works. These amounts should then be listed and the

percentage of each to the total thereof determined. Application of these percentages to the total increase in the sinking fund for the year for this purpose, will indicate the amounts applicable to the respective municipalities thus absorbing the charges included in bills rendered to other consumers as well as the interest accumulations. A subsidiary ledger or record should be maintained for the purpose of posting these amounts by municipalities and this record will be under direct control of the Sinking Fund Reserve account maintained for this purpose.

No thought is entertained that these figures may be required because of a possible change of ownership, but they are deemed necessary as a basis for determination in future years of equitable charges for power as between the respective municipalities. It is to be anticipated that new municipal consumers will continue to be added from year to year and also that the quantities of power used by certain municipalities may increase out of proportion to the general average increase of the system. In either circumstance the power used in later years by a municipality may be seriously disproportionate to its interest in the property, and it is with the idea of now making provision for this contingency that this suggestion is made.

- - - -

In conclusion we may say that certain matters more or less general to all systems including our review of the minutes of the proceedings of the Commission will be commented upon in our general report to be later submitted.

Yours very truly,

Rice Williams & Co.

Exhibit I.

THE HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM - OPERATING ACCOUNT

Particulars	Year ending October 31st 1918	1919	1920	1921
REVENUE:				
From Municipalities	$2,247,494.92	2,535,979.03	3,180,160.84	3,542,028.61
From Companies	483,546.91	534,131.28	570,904.84	750,465.74
Total Revenue	$2,731,041.83	3,070,110.31	3,751,065.68	4,292,494.35
COST OF OPERATING, including portion of Administrative Expenses:				
Power purchased from Ontario Power Company and others	$1,385,706.41	1,517,457.57	1,966,304.34	2,411,965.30
Transformer Stations-				
Operating Expenses (per attached Statement)	115,867.94	164,744.21	189,868.14	193,543.65
Maintenance Expenses (per attached Statement)	109,985.71	83,722.05	69,816.30	79,095.24
Transmission Lines-				
Operating Expenses (per attached Statement)	-	-	-	413.64
Maintenance Expenses (per attached Statement)	59,370.13	98,165.97	73,997.92	86,363.42
Overhead Expenses (per attached Statement)	101,594.40	159,282.37	251,416.27	296,662.64
Total Expenses	$1,772,524.59	2,023,372.17	2,551,402.97	3,068,043.91
Balance, before deducting Fixed Charges	$ 958,517.24	1,046,738.14	1,199,662.71	1,224,450.44
DEDUCT- Fixed Charges:				
Interest on Capital Investment	$ 481,812.79	583,734.20	644,859.37	668,319.17
Provision for Renewals	266,579.32	293,940.60	310,519.12	322,462.26
Provision for Sinking Fund	138,481.90	151,246.06	195,569.61	212,237.83
Provision for Contingencies	37,500.00	37,500.00	37,500.00	37,500.00
Total Fixed Charges	$ 924,374.01	1,066,420.86	1,188,448.10	1,240,519.26
Balance (representing profit or Loss from sale of power to private companies)	$ 34,143.23	19,682.72	11,214.61	16,068.82
DEDUCT- Net Profit or Loss from sale of power to private Companies, transferred to Reserve for Contingencies	$ 34,143.23	19,682.72	11,214.61	16,068.82
	$ -	-	-	-

NIAGARA SYSTEM

OPERATING AND MAINTENANCE EXPENSES

Particulars	Year ending October 31			
	1918	1919	1920	1921
TRANSFORMER STATIONS - Operating Expenses:				
Labor	$101,606.68	128,706.58	158,195.30	155,120.05
Supplies	7,453.02	12,095.52	10,555.92	11,735.62
Heating	-	-	-	1,326.76
Lubricants and Waste	-	-	-	1,009.39
Water Supply	-	-	-	2,944.51
Telephone and Telegraph	18.43	1,128.73	1,137.95	890.67
Rental and Taxes	-	886.59	308.57	2,025.73
Travelling Expenses	-	-	-	1,018.40
Power Supplied	-	-	-	2,418.75
Coal and Water	6,788.18	6,905.83	6,124.55	-
General Expense and Insurance	1.63	15,020.96	14,162.99	-
General Expenses	-	-	-	15,699.52
Insurance	-	-	-	2,916.10
Miscellaneous	-	-	-	489.63
Total	$115,867.94	164,744.21	189,868.14	193,543.65
TRANSFORMER STATIONS - Maintenance Expenses:				
Lands	$ -	-	-	1,843.77
Buildings and Structures	7,812.23	9,801.42	10,111.92	8,452.41
Water Conveying and Controlling Structures	-	-	-	484.61
Hydraulic Machinery and Apparatus	-	1,026.53	1,450.69	421.01
Electric Equipment	93,779.48	57,300.29	45,260.34	51,487.44
Permanent Auxiliary Systems	8,394.00	11,117.72	9,491.11	10,182.95
Proportion of Administrative Office Expense	-	-	-	4,667.97
General Expense and Insurance	-	4,476.09	3,502.24	1,062.13
Miscellaneous	-	-	-	492.95
Total	$109,985.71	83,722.05	69,816.50	79,095.24
TRANSMISSION LINES - Maintenance Expenses, Etc.:				
Lands	$ 10,645.24	18,661.29	6,460.78	14,192.71
Buildings and Structures	-	-	-	2,051.75
Pole or Tower Lines	9,690.40	40,510.69	30,053.61	30,442.09
Conductors and Cables - Overhead	13,577.99	8,922.21	12,181.87	8,696.37
Engineering and Superintendence	-	-	-	3,097.37
Patrol Expense	25,456.50	26,622.03	21,244.69	27,392.49
Special Compensation	-	-	-	480.00
Structures and Apparatus	-	-	-	10.64
General Expense and Insurance	-	5,264.08	3,701.63	-
Operation and Administration	-	192.00	355.34	-
Rents	-	2,006.33	-	-
Total	$ 59,370.13	98,165.97	73,997.92	86,363.42

NIAGARA SYSTEM

OVERHEAD EXPENSES

Particulars	Year ending October 31, 1918	1919	1920	1921
OPERATING DEPARTMENT - HEAD OFFICE:				
Salaries	$ 14,597.47	27,606.63	38,370.36	27,985.97
Expenses	6,020.81	10,956.14	3,419.47	691.06
Miscellaneous Expenses	6,664.13	20,983.90	18,136.08	4.56
Auto Expenses	-	-	2,311.02	483.05
Truck and Auto Expense Undistributed	-	23,891.52	52,376.07	29,040.50
Temporary Installation to connect with Canadian-Niagara Power Company	-	-	745.90	773.57
Handling Maintenance Stores	11,617.27	2,808.72	12,379.36	13,271.01
Depreciation of Tools	6,611.65	6,763.33	2,777.91	3,860.06
All stations, Lines, Maintenance and Operation	-	8,270.97	1,885.61	12,914.74
Extraordinary Maintenance	-	7,855.99	26,192.85	9,899.39
Maintenance Operating Department's Telephone	496.14	-	424.06	-
Municipal Auditors' Expense	4,382.33	3,906.21	8,530.63	9,167.90
Municipal Department	-	9,201.33	-	10,799.09
Municipal Engineers' Expense	1,583.57	-	8,269.13	-
Municipal Administration	8,311.21	12,383.35	18,722.18	21,020.15
Estimating Department's Expense	1,105.50	3,189.82	4,544.99	2,732.20
Electric Engineering Department's Expense	-	-	6,493.57	1,983.83
Overhead Operating Expense	-	-	28,770.89	42,041.39
Rental - Ontario Power Company's Lines to Chippawa	-	-	2,062.26	2,906.00
Advertising (publishing 1918-19 Report)	-	-	7,681.92	9,794.80
Legal Expenses	2,122.95	75.00	1,507.10	2,650.00
MacFarlane Engineering Co. Fixed Charges 1918-19	-	-	592.59	-
Operating Adjustment 1913	-	14,729.03	-	-
Insurance	3,232.11	426.98	-	-
Continuous Inventory	85.56	3,661.63	-	8.56
Executive Expense	-	-	5,222.32	9,258.42
General Expense	33,130.55	2,571.82	-	-
Field Office Salaries	-	-	-	16,971.99
" " Expenses	-	-	-	2,911.79
" " Miscellaneous Expenses	-	-	-	2,145.00
All Stations and Lines Undistributed Expense	-	-	-	16,962.88
Preliminary Investigations	-	-	-	171.15
Depreciation on Hamilton Furniture	163.97	-	-	525.99
Rent	-	-	-	1,248.05
Garage Operation Balance	-	-	-	15,266.82
Laboratory Operation Balance	-	-	-	25,588.22
Pole Loss	-	-	-	5,335.82
Proportion of Administration Expense re Adjustment Dunnville Line - Maintenance Deferred	-	-	-	1,751.32
Provision for Doubtful Accounts	7,500.00	-	-	-
Total Overhead Expenses	$ 107,625.22	159,282.37	251,416.27	296,662.64
LESS- Amounts transferred to Renewals	6,030.82	-	-	-
TOTAL	$ 101,594.40	159,282.37	251,416.27	296,662.64

HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA RURAL LINES - OPERATING ACCOUNT

Particulars	Year ending October 31, 1918	1919	1920	1921
REVENUE:				
From City of St. Catharines and others for power supplied	$ 73,509.09	51,728.93	59,246.72	64,012.20
From Sundry Customers on Lines operated by the Commission	3,542.39	3,914.54	4,521.96	5,327.79
Interest collected from Municipalities operating certain Lines	21,916.93	23,257.51	22,990.68	21,205.82
Sinking Fund collected from Municipalities operating certain Lines	8,178.41	8,456.95	8,533.13	7,906.13
Total Revenue	$ 107,146.82	87,357.93	95,292.49	98,451.94
COST OF OPERATING INCLUDING PORTION OF ADMINISTRATIVE EXPENSES:				
Power Purchased -				
To supply the City of St. Catharines and others	$ 73,267.65	51,371.74	58,804.88	63,524.17
To supply customers on Lines operated by the Commission	1,857.89	1,976.68	2,442.94	2,706.43
Expenses chargeable to the operation of the lines operated by the Commission -				
Labor and Board	198.33	163.38	303.99	293.63
Material	106.37	11.91	116.18	332.28
Engineering	23.21	398.90	594.65	342.78
Administrative Office Expense	8.75	13.60	4.78	4.44
Total Expenses	$ 75,462.20	53,936.21	62,267.42	67,203.73
Balance before deducting Fixed Charges	$ 31,684.62	33,421.72	33,025.07	31,248.21
DEDUCT- FIXED CHARGES:				
Interest on Capital Investment	$ 22,704.64	24,072.74	33,794.02	22,209.64
Provision for Renewal of Lines, etc. (only those operated by the Commission)	787.71	835.44	811.76	896.59
Provision for Sinking Fund	8,542.06	8,823.88	8,894.24	8,323.28
Total Fixed Charges	$ 32,034.41	33,732.06	33,500.02	31,429.51
Net Loss on Lines operated by the Commission (included in Surplus Account in Hydro-Electric Power Commission Balance Sheet)	$ 349.79	310.34	474.95	181.30

HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM

SUMMARY OF RESERVES FOR RENEWALS

Period	Annual Accrual based upon 2.5% of Capital Investment	Interest at 4%	Together
1912 to October 31, 1916	$ 684,368.90	$ 42,993.63	$ 727,362.53
Year ending October 31,			
1917	221,543.00	29,094.60	250,637.60
1918	266,579.32	39,245.52	305,824.84
1919	293,940.60	51,428.28	345,368.88
1920	310,519.12	65,205.39	375,724.51
1921	322,462.26	80,234.41	402,696.67
Together	$2,099,413.20	$ 308,201.83	$ 2,407,615.03
Add- Portion of Reserve applicable to equipment transferred from other systems			1,376.72
			$ 2,408,991.75
Deduct- Charges against Reserve-			
Amounts accrued on Equipment transferred from System	$ 32,264.02		
Cost of replacing insulators, poles, cross-arms, etc.	75,582.52		
Obsolete Transformers, switches, meters, etc.	29,969.69		
Renewal of roofs, walls, etc.	8,580.33		
Reserve applicable to Dundas property destroyed by fire	19,743.00		
Miscellaneous charges	1,288.87	$ 167,428.43	
Interest applicable to above charges		19,197.42	$ 186,625.85
Balance as at October 31, 1921			$ 2,222,365.90

HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM

STATEMENT SHOWING THE BASIS OF THE ANNUAL RATE FOR THE RESERVE FOR RENEWALS

Classification	Capital Investment (October 31- 1916)		Estimated Residual Value		Reserve to be Provided		
						Annual Provision (Sinking Fund Basis)	
	Total Cost	Estimated Life (in Years)	% of Investment	Amount	Total Amount	Amount	% to Investment
CONDUIT SYSTEM:							
Cable	61,441	15	30	$ 18,432	$ 43,009	$ 2,148	
Duct System	35,258	50	-	-	35,258	231	
Together	$ 96,699	-	-	$ 18,432	$ 78,267	$ 2,379	2,460
STEEL TOWER LINES:							
Tower Lines	$2,310,253	50	5	$ 115,513	$2,194,740	$ 14,376	
Cable	1,115,035	50	60	669,021	446,014	2,922	
Insulators	250,179	8	-	-	250,179	27,151	
Telephone Line	225,150	12	10	22,515	202,635	13,486	
Together	$3,900,617	-		$ 807,049	$3,093,568	$ 57,935	1,485
TRANSFORMER STATIONS:							
Sites	$ 45,393	-	100	$ 45,393	$ -	-	
Buildings	768,994	50	7	53,830	715,164	4,685	
Mechanical Equipment	174,702	20	10	17,470	157,232	5,280	
Electrical Equipment	1,786,052	16	20	357,210	1,428,842	65,455	
Together	$2,775,141	-	-	$ 473,903	$2,301,238	$ 75,420	2,718
WOOD POLE LINES:							
Right-of-Way	$ 63,663	-	100	$ 63,663	$ -	$ -	
Pole Line	919,540	12	-	-	919,540	61,197	
Cable	499,535	50	60	299,721	199,814	1,309	
Together	$1,482,738	-	-	$ 363,384	$1,119,354	$ 62,506	4,216
DISTRIBUTING STATIONS:							
Sites	$ 1,119	-	100	$ 1,119	$ -	$ -	
Buildings	33,367	30	4	1,335	32,032	571	
Mechanical Equipment	351	20	10	35	316	11	
Electrical Equipment	186,293	16	20	37,259	149,034	6,828	
Together	$ 221,130	-	-	$ 39,748	$ 181,382	$ 7,410	3,351
Totals	$8,476,325	-	-	$1,702,516	$6,773,809	$205,650	2,426

Reconciliation with Capital Investment Account
as at October 31, 1916-

Total Investment in Capital Account, per books		$10,142,561.89
Deduct-		
Non-Operating Capital consisting of		
Construction Work in Progress	$ 288,704.07	
Steel Tower Lines Right-of-Way	1,046,670.92	
Rural Lines- Operating Capital	330,861.90	1,666,236.89
Balance as above		$ 8,476,325.00

HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM

STATEMENT OF RESERVE FOR SINKING FUND

Particulars	Year ending October 31					
	1917	1918	1919	1920	1921	Together
Balance at beginning of Period	$ 74,708.45	$182,497.76	$328,102.88	$493,407.36	$715,912.36	$ 74,708.45
Amounts included in Cost of Power to-						
Municipalities	83,311.46	106,872.60	114,844.72	155,794.96	168,957.93	629,781.67
Companies	21,489.49	31,609.30	36,401.34	45,660.63	43,279.90	178,440.66
Interest at 4% per annum on balances at beginning of Period	2,988.36	7,299.91	13,176.09	21,049.41	28,644.84	73,158.61
Credit Adjustments-						
Breslau and Petersburg balances transferred from Rural Lines	-	417.07	-	-	-	417.07
Deller Brothers balance transferred to Niagara System	-	-	882.33	-	-	882.33
Thamesford Interest transferred from Rural Lines	-	-	-	-	7.53	7.53
Thorndale Interest transferred from Rural Lines	-	-	-	-	6.47	6.47
Baden Sinking Fund transferred from Rural Lines	-	-	-	-	194.70	194.70
Baden Interest transferred from Rural Lines	-	-	-	-	7.79	7.79
Breslau and Petersburg 1920 Sinking Fund transferred from Rural Lines	-	-	-	-	706.37	706.37
Totals	$182,497.76	$328,696.64	$493,407.36	$715,912.36	$957,717.89	$ 958,311.65
Deduct- Debit Adjustments-						
National Brick Company Sinking Fund	-	570.92	-	-	-	570.92
National Brick Company Interest	-	22.84	-	-	-	22.84
Total	-	593.76	-	-	-	593.76
Balance at close of Period	$182,497.76	$328,102.88	$493,407.36	$715,912.36	$957,717.89	$ 957,717.89

HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM

STATEMENT OF RESERVE FOR CONTINGENCIES

Particulars	Year ending October 31 1917	1918	1919	1920	1921	Together
Balance at the beginning of the period	$ -	$106,618.90	$ 47,237.53	$ 15,762.48	$ 38,514.55	$ -
Amounts included as part of the cost of power delivered-						
To Municipalities	28,101.71	30,776.61	30,108.99	32,360.68	30,337.08	151,685.07
To Sundry Contract Customers	9,398.29	6,582.71	7,391.01	5,139.32	7,162.92	35,674.25
Net Profit or Loss for year from Contracts with sundry Companies closed into Reserve	61,473.10	34,143.23	19,882.72	11,214.61	16,066.82	71,079.40
Profit or Loss on Contracts with sundry power customers, not previously closed into Reserve	-	-	2,705.39	16,104.00	3,045.05	7,853.56
Profit on sales of Aluminum Cable	10,349.72	-	-	-	-	10,349.72
Profit or Loss on sundry equipment sold or otherwise disposed of	2,703.92	-	-	-	-	2,703.92
Interest at 4% per annum on monthly balances	-	4,256.78	2,156.12	1,510.10	1,391.90	9,314.90
Miscellaneous Materials previously charged to Construction, Operations, etc.	-	-	22,097.90	-	-	22,097.90
Total	$106,618.90	$182,378.23	$ 86,603.44	$ 82,091.19	$ 55,792.58	$305,350.88
Deduct- Charges to the Reserve as per attached Statement	-	135,140.70	70,840.96	43,576.64	30,917.57	280,475.87
Balance at close of fiscal year ending October 31,	$106,618.90	$ 47,237.53	$ 15,762.48	$ 38,514.55	$ 24,875.01	$ 24,875.01

HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM

DESCRIPTION OF THE MORE IMPORTANT CHARGES TO THE RESERVE FOR CONTINGENCIES

Particulars	Amount	Remarks
YEAR ENDING OCTOBER 31, 1918:		
Wrecking and Rebuilding Dundas High Tension Station, including new electrical equipment throughout This Station was wrecked by explosion, caused by lightning, in August, 1916	$ 88,288.02	The principal items were- Building $18,448.12 Electrical Equipment 77,566.85 Interest 7,086.87 Sundries 12,799.18 from which is deducted the value of improvements charged to Capital Account, $7,870.00, and Balance of Reserve for Renewals Account at the date of the fire - $19,743.00.
Moving of Welland Canal Towers, 110,000 volt transmission line, Section A These were moved to make way for the new Welland Canal	17,232.54	Consists chiefly of labor
Taking down 3/0 aluminum Conductor on the two circuits of Section B, between the Dundas High Tension Switching Station to the end of the 3/0 copper Conductor, just west of the Humber River, and restringing 6/0 steel reinforced aluminum Cable To increase the capacity of the Conducter	25,577.61	Total cost of the work $164,639.63 Less- Value of additional cable, together with cost of refabrication of the old cable, amounting to $126,376.57, and other charges $136,988.80 Portion of Renewals Reserve applicable to the original Cable 2,073.22 139,062.02 Balance $ 25,577.61 The cost of labor in restringing the new Cable is included in the above balance charged to the Reserve Account.
Miscellaneous small expenditures	4,042.53	
Total Expenditure during the Year ending October 31, 1918	$ 135,140.70	
YEAR ENDING OCTOBER 31, 1919:		
Removal of 4 - 1250 K.V.A. Transformers from Dundas to Guelph To increase the capacity of the Transformers	$ 4,300.00	An amount estimated by the Engineering Department as sufficient to write off the cost of originally installing the Transformers at Dundas and the cost of removal to Guelph.
Changing Transformers and other equipment from 13200 volt to 26400 volt at Seaforth Municipal Station To increase the capacity of the Transformers	5,679.37	These amounts cover the cost of changing equipment from 13200 volt to 26400 volt, less the value of the old equipment. The equipment was the property of the Municipalities, but the Commission undertook the work without charge to the Municipalities, and the proceeds of the sale of the original equipment removed was applied against the cost of the work order.
Changing Transformers and other equipment from 13200 volt to 26400 volt at Mitchell Municipal Station To increase the capacity of the Transformers	5,039.37	The work was undertaken to get better operating conditions on the Stratford-Goderich section, by making the equipment uniform throughout.
Dismantling and rebuilding 2500 K.V.A. Transformer, Dundas Transformer failed in service	3,181.36	This includes all labor and material used in this work.
Carried Forward	18,800.10	

Particulars	Amount	Remarks
Brought forward	$ 18,800.10	
Dismantling and rebuilding 3 - 750 K.V.A. Transformers, Guelph Transformers burned out by overloading in December, 1917	5,377.57	This includes all labor and material used in this work.
Labor and expense taking down 4/0 aluminum Cable and stringing 6/0 reinforced Cable, Section A, Niagara to Dundas To increase the capacity of the Conductor	29,752.94	Total cost of the work $191,402.18 Less- Value of additional aluminum and steel cable, together with cost of refabrication, aggregating $147,008.43 and other charges 9,551.53 $156,559.96 Portion of Renewals Reserve applicable to the value (estimated) of the old Cable 5,089.28 161,649.24 Balance $ 29,752.94
Miscellaneous small expenditures	16,910.35	
Total expenditure during the year ending October 31, 1919	$ 70,840.96	
YEAR ENDING OCTOBER 31, 1920:		
Dismantling and repairing 750 K.V.A. Transformer, Woodstock Failed in service due to defective water cooling coils	$ 2,646.00	Cost of labor and material.
Replacing 56 poles at Clinton Junction These poles were blown over in a severe windstorm.	4,900.72	Cost of labor and material
Replacing poles at Seaforth Junction These poles were blown over in a severe windstorm.	4,593.76	Cost of labor and material.
Replacing 4 Steel Towers on Section A These towers were wrecked by windstorm July 23, 1920.	4,844.43	Cost of labor and material.
Replacing Steel Cable in Section H with 6/0 steel reinforced aluminum Cable, Kitchener to St. Thomas The original aluminum Cable was removed during the war for use in more important sections and replaced by a steel Cable, aluminum being scarce at that time. After the war the steel cable was removed and a steel reinforced aluminum Cable substituted.	18,963.13	Total cost of the work $ 57,439.19 Cost of Steel $7,106.02 Cost of 6/0 Aluminum- 59,968 lbs. @ 20¢ $11,993.60 47,195 30¢ 14,158.50 7,520 36½¢ 2,742.31 28,894.41 Betterments to line hardware 996.95 $36,997.38 Portion of Renewals applicable to old Conductor 1,478.68 38,476.06 Balance $ 18,963.13 59,968 pounds of aluminum Cable taken for use on more important sections during the war was restored to this section at the cost of the original cable, i.e., 20¢ per pound, and the excess of the market price at date restored over original cost is included in the above balance.
Miscellaneous small expenditures	7,628.60	
Total expenditures during the year ending October 31, 1920	$ 43,576.64	

Particulars	Total Expenditures	Remarks
YEAR ENDING OCTOBER 31, 1921:		
Final payment for Electrical Equipment replacing wrecked equipment at Dundas This Station was wrecked by explosion, caused by lightning, in August 1916	$ 3,909.75	Part of the cost of wrecking, rebuilding Dundas High Tension Station, referred to in the first item of the statement.
Repairing 750 K.V.A. Transformers at Preston high tension Station This Transformer failed during an electrical storm	2,798.70	Labor and Materials used in repairing.
Repairing 2 - 1250 K.V.A. Transformers and Oil Switches at Woodstock This equipment failed in service	5,745.45	Labor and material used in repairing.
Repairing 1250 K.V.A. Transformer at Woodstock This Transformer failed in service June 14,1920	2,831.84	Labor and material used in repairing.
Miscellaneous small expenditures	15,631.83	
Total expenditure during the year ending October 31, 1921	$ 30,917.57	

LIST OF MUNICIPALITIES IN THE NIAGARA SYSTEM, TOGETHER WITH BALANCES AS AT OCTOBER 31, 1921, RESULTING FROM THE ADJUSTMENT, TO THE COST OF POWER, OF INTERIM POWER BILLS

Municipality, Township, etc.	Date Commenced Operating	Balance October 31, 1921	
		Debit	Credit
Acton	Jan. 1913	$ -	$ 594.01
Ailsa Craig	Jan. 1916	-	623.49
Aylmer	Mar. 1918	136.72	-
Ayr	Jan. 1915	-	362.21
Baden	May 1912	-	2,818.80
Beachville	Aug. 1912	885.77	-
Blenheim	Nov. 1915	-	513.20
Bolton	Feb. 1915	2,611.64	-
Bothwell	Sept. 1915	-	381.65
Brampton	Nov. 1911	1,754.81	-
Brantford	Feb. 1914	320.37	-
Brigden	Jan. 1918	1,257.65	-
Burford	June 1915	2,584.63	-
Burgesville	Nov. 1916	-	786.00
Caledonia	Oct. 1912	35.88	-
Chatham	Feb. 1915	-	5,020.08
Chippawa	Sept. 1919	-	821.19
Clinton	Mar. 1914	-	231.20
Comber	May 1915	3,055.02	-
Dashwood	Sept. 1917	116.59	-
Delaware	Mar. 1915	72.82	-
Dereham Township	Sept. 1919	1,412.05	-
Dorchester	Dec. 1914	-	973.81
Drayton	Mar. 1918	-	122.02
Dresden	April 1915	-	1,650.00
Drumbo	Dec. 1914	-	235.10
Dublin	Oct. 1917	631.82	-
Dundas	Jan. 1911	1,497.78	-
Dunnville	June 1918	7,736.26	-
Dutton	Sept. 1915	-	31.29
Elmira	Nov. 1913	-	1,740.92
Elora	Nov. 1914	-	1,009.28
Embro	Jan. 1915	2,922.18	-
Etobicoke Township	Aug. 1917	-	5,490.19
Exeter	June 1916	1,120.95	-
Fergus	Nov. 1914	1,107.75	-
Forest	Mar. 1917	-	447.01
Galt	May 1911	709.04	-
Georgetown	Sept. 1913	-	1,361.27
Glencoe	Aug. 1920	-	489.52
	Forward	$29,969.73	$25,702.24

Exhibit VII
Cont'd.

Municipality, Township, etc.	Date Commenced Operating	Balance October 31, 1921 Debit	Credit
	Forward	$29,969.73	$25,702.24
Goderich	Feb. 1914	9,572.43	-
Granton	July 1916	-	291.92
Guelph	Dec. 1910	-	16,180.60
Hagersville	Sept. 1913	-	1,946.94
Hamilton	Feb. 1911	24,449.94	-
Harriston	July 1916	572.44	-
Hensall	Jan. 1917	312.18	-
Hespeler	Feb. 1911	519.39	-
Highgate	Dec. 1916	-	233.42
Ingersoll	May 1911	-	10,377.26
Kitchener	Jan. 1911	5,338.77	-
Lambeth	April 1915	-	2.69
Listowel	June 1916	-	2,331.15
London	Jan. 1911	-	46,520.49
London Railway Commission (London & Pt. Stanley Ry.)	Aug. 1914	1,215.27	-
Lucan	Feb. 1915	-	2,014.16
Lynden	Nov. 1915	-	448.42
Markham	April 1920	-	1,261.89
Milton	April 1913	-	2,446.65
Milverton	June 1916	-	2,991.13
Mimico	May 1912	793.81	
Mitchell	Sept. 1911	-	654.37
Moorefield	Mar. 1918	-	204.56
Mount Brydges	Mar. 1915	82.43	-
New Hamburg	Mar. 1911	396.67	-
Newbury	Mar. 1921	-	13.17
New Toronto	Feb. 1914	8,293.83	-
Niagara Falls	Dec. 1915	7,352.04	-
Niagara-on-the-Lake	Aug. 1919	-	1,705.58
Norwich	May 1912	-	3,058.69
Oil Springs	Feb. 1918	303.23	-
Otterville	Feb. 1916	-	177.04
Palmerston	July 1916	-	1,097.92
Paris	Feb. 1914	907.46	-
Parkhill	May 1920	-	480.87
Petrolia	May 1916	-	3,177.80
Plattsville	Dec. 1914	873.01	-
Port Credit	Aug. 1912	165.21	-
Port Stanley	April 1912	-	1,768.87
Preston	Jan. 1911	997.29	-
Princeton	Jan. 1915	907.22	-
Queenston	Mar. 1921	12.60	-
Ridgetown	Dec. 1915	-	842.88
Rockwood	Sept. 1913	1,585.67	-
Rodney	Feb. 1917	-	2,287.05
	Forward	$94,620.62	$128,217.76

Exhibit VII
Cont'd.

Municipality, Township, etc.	Date Commenced Operating	Balance October 31, 1921 Debit	Balance October 31, 1921 Credit
	Forward	$ 94,620.62	$128,217.76
St. George	Sept. 1915	-	191.47
St. Jacobs	Sept. 1917	105.45	-
St. Mary's	May 1911	-	948.58
St. Thomas	April 1911	972.51	-
Sarnia	Dec. 1916	-	15,478.49
Scarboro Township	Aug. 1918	811.91	-
Seaforth	Nov. 1911	-	189.81
Simcoe	April 1915	560.81	-
South Dorchester Township	Nov. 1920	-	-
Springfield	Aug. 1917	54.28	-
Stamford Township	Nov. 1916	-	414.23
Stratford	Jan. 1911	-	1,864.48
Strathroy	Dec. 1914	-	1,514.02
Streetsville	Nov. 1919	-	4,524.99
Tavistock	Nov. 1916	-	1,118.77
Thamesford	Feb. 1914	-	218.21
Thamesville	Oct. 1915	-	330.30
Thorndale	Mar. 1914	1,910.24	-
Tilbury	April 1915	2,638.05	-
Tillsonburg	Aug. 1911	1,501.62	-
Toronto	June 1911	76,929.90	-
Toronto Township	Aug. 1913	416.81	-
Walkerville	Nov. 1914	-	14,564.09
Wallaceburg	Feb. 1915	-	6,332.08
Wardsville	June 1921	34.83	-
Waterdown	Nov. 1911	155.77	-
Waterford	April 1915	-	312.10
Waterloo	Dec. 1910	439.71	-
Watford	Sept. 1917	929.51	-
Welland	Sept. 1917	2,381.46	-
Wellesley	Nov. 1916		38.66
Weston	Aug. 1911	1,453.36	-
West Lorne	Jan. 1917	-	2,184.30
Windsor	Oct. 1914	-	29,373.26
Woodbridge	Dec. 1914	103.15	-
Woodstock	Jan. 1911	2,688.07	-
Wyoming	Nov. 1916	1,572.97	-
Zurich	Sept. 1917	533.38	-
Total		$190,814.41	$207,815.60

LIST OF MUNICIPALITIES AND OTHERS ON THE NIAGARA RURAL LINES

Lines Operated by Municipalities, etc.-

Ancaster Township
Bolton
Bothwell
Brampton
Chatham
Dereham Township
Elora
Etobicoke
Georgetown
Goderich
Lucan
Milton
Norwich
Preston
St. Thomas
Scarboro Township
Stratford
Toronto
Toronto Township
Vaughan Township
Walkerville
Waterdown
Waterford
Waterloo
Weston
Windsor
Woodstock
Welland (For Port Robinson)
St. Catharines
Grantham Township
Louth Township
Port Colborne
Merritton

Lines Operated by the Hydro-Electric Power Commission of Ontario-

Brady & Raymond
Wm. Pullen
Innes, Karn & Longworth
W. G. Bailey
Port Dalhousie
South Dorchester Township
West Flamboro Township
Copetown District

Exhibit II

HYDRO - ELECTRIC POWER COMMISSION OF ONTARIO

NIAGARA SYSTEM

STATEMENT OF ACCOUNTS DUE BY MUNICIPALITIES IN RESPECT OF THE COST OF POWER, AT OCTOBER 31, 1921.
STILL UNPAID AT SEPTEMBER 20, 1922

Year ending October 31

Municipality	Years	Balance at October 31 1916	1917 Charge or Credit	1917 Interest	1918 Charge or Credit	1918 Interest	1919 Charge or Credit	1919 Interest	1920 Charge or Credit	1920 Interest	1921 Charge or Credit	1921 Interest	Balance at October 31 1921	Years	Payments on Account Subsequent to Oct.31,1921
Bolton	2	$ 2,345.84	$1,167.06	$ 93.83	38.47	$144.27	$ 921.79	$ 148.62	$1,306.55	$ 191.44	$1,206.02	$146.83	$ 2,611.64	7	$ -
Brigden	-	-	-	-	862.20	-	486.22	34.49	432.80	55.32	212.00	40.22	1,257.65	4	-
Burford	2	918.19	868.51	36.72	846.80	72.94	309.98	109.73	100.96	126.51	292.01	104.20	-		-
											C 1,000.00	-	2,584.63	7	396.21
Comber	2	1,694.78	1,160.16	67.79	672.33	116.91	605.89	148.48	707.31	178.65	1,040.17	157.51	3,055.02	7	1,000.00
Delaware	2	25.57	99.87	1.02	63.94	2.93	290.57	5.61	192.95	17.45	198.44	10.43	72.82	5	
Dereham Township	-	-	-	-	-	-	224.84	-	81.78	8.99	1,083.82	12.62	1,412.05	3	
Dublin	-	-	90.47	-	-	-	-	5.71	-	-	520.03	15.61	631.82	1	96.18
Dunnville	-	-	-	-	2,979.29	-	3,690.53	119.17	1,934.32	271.56	526.35	277.30	7,736.26	4	
									2,062.26(1)						
Embro	2	1,185.72	964.20	47.43	1,156.36	86.89	237.58	137.62	C 763.15	-	255.12	124.65	2,922.18	7	124.65
															800.00
Fergus	2	1,373.28	452.48	54.93	34.82	75.23	364.14	76.84	44.05	65.35	613.05	65.70	1,107.75	7	
Goderich	2	10,974.60	1,595.36	438.98	353.80	520.36	144.08	480.55	3,180.09	-	1,060.44	331.40	9,572.43	7	1,060.44
					C3,175.50				C5,335.97						
Harriston	1	460.53	1,615.03	18.42	1,070.95	83.76	1,047.74	129.95	1,154.75	177.06	3,014.20	137.95	572.44	6	
Kitchener	5	5,008.36	3,941.72	558.51	7,581.62	738.53	87.98	1,071.33	4,024.00	1,117.70	6,748.49	772.86			
											(2) 2,028.37		5,338.77		
											(4)22,368.87				
Niagara Falls	1	372.08	1,457.34	14.89	3,662.00	73.77	1,473.55	223.20	2,488.61	291.07	6,576.59	183.66			
											(2) 2,926.11		7,352.04		6,576.59
											(3) 3,112.29				
Oil Springs		-	-	-	184.15	-	706.31	7.37	283.74	20.59	41.53	10.06	303.23	3	
Plattsville	2	1,496.14	1,857.47	59.85	897.69	136.54	295.08	177.90	1,050.69	137.03	610.27	45.89			
									C2,000.00		C 1,200.00		873.01	4-7	
Princeton	2	363.47	549.97	14.54	304.67	37.12	208.07	50.79	C 750.00		93.72	34.87	907.22	7	
Rockwood	4	1,430.98	663.25	57.23	556.74	86.06	513.02	67.23	155.48	61.76	77.46	58.01			
							717.11(5)						1,585.67	8	435.47
Springfield		-	192.97	-	262.45	7.72	143.71	18.53	79.31	13.52	415.64	17.23			
											86.66		54.28		
Thorndale	3	858.08	399.46	34.42	125.55	51.68	239.03	58.76	386.63	51.55	918.35	38.15	1,910.24	8	553.74
Welland		-	-	-	-	-	-	-		-	2,530.84	149.38	2,381.46	1	
Wyoming		-	944.20	-	433.25	37.77	635.84	56.61	276.81	84.31	418.81	76.61	1,572.97	5	
Totals													55,815.58		$11,043.28

NOTE:

C - Denotes cash payments made on account
(1) - Credit of $2,062.26 allowed by a charge to current account for defective insulators
(2) - Adjustment of power accounts Receivable
(3) - Charge for amount paid to Ontario Power Company for use of transformers
(4) - Representing 22 - Ten Year 6% Bonds 1931 (Par Value $22,000.00) of the Hydro-Electric Power Commission of Ontario together with accrued interest applied in reduction of amount due to the municipality of Kitchener
(5) - Adjustment of 1913 cost of power

EXCERPTS FROM AGREEMENT DATED MAY 4, 1908, ENTERED INTO BY THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO and THE MUNICIPAL CORPORATIONS OF TORONTO, LONDON, GUELPH, STRATFORD, ST. THOMAS, WOODSTOCK, KITCHENER, GALT, BRESPELER, ST. MARY'S, PRESTON, WATERLOO, NEW HAMBURG and INGERSOLL

The Commission agrees:

(1) To construct a line to transmit electrical energy from Niagara Falls to the municipal corporations, and to have said electrical energy available in the municipal corporations on the 19th. day of March, 1910, in such quantities as the municipalities have requested.

(2) To supply additional electrical energy to the municipal corporations, or any one of them, in blocks of not less than 1000 horse power and up to 30,000 horse power, at the expiration of three months written notice, and up to 100,000 horse power at the expiration of nine months written notice.

In consideration of the above covenants the corporations agree as follows:

(1) To pay for three-fourths of the power supplied and held in reserve for them, whether the said power is taken or not, and when the greatest amount of power taken for 20 consecutive minutes in any month shall exceed three-fourths of the amount during such 20 minutes so supplied and held in reserve, to pay for this greater amount during the entire month. When the power factor of the greatest amount of power taken for said twenty minutes falls below 90 per cent., the corporations shall pay for 90 per cent. of said power divided by the power factor. Bills for power supplied shall be rendered monthly by the Commission on or before the 4th. of the succeeding month, and paid by the corporations on or before the 18th. All payments in arrears shall bear interest at the legal rate.

(2) To take power exclusively from the Commission during the continuance of this Agreement.

(3) To pay annually interest at four per cent. per annum upon its proportionate part of moneys expended by the Commission on capital account, for the construction of the said line, transformer stations and other necessary works, subject to adjustment at least annually of the amounts payable by municipal corporations for such interest.

(4) To pay an annual sum for its proportionate part of the cost of the construction of said lines, stations and works, so as to form in thirty years a sinking fund for the retirement of the securities to be issued by the Province of Ontario.

(5) To bear its proportionate part of the line loss and to pay its proportionate part of the cost to operate, maintain, repair, renew and insure the said line, stations and works.

(6) The Commission shall at least annually adjust and apportion the amounts payable by the municipal corporations for such power, and such interest, sinking fund, line loss and cost of operating, maintaining, repairing, renewing and insuring the line and works.

If at any time any other municipal corporation applies to the Commission for a supply of power, the Commission shall notify the applicant and the corporations, parties hereto, in writing of a time and place and hear all representations that shall be made as to the terms and conditions for such supply of electrical energy.

It is hereby declared that the Commission is to be a trustee of all property held by the Commission under this Agreement for the corporations and other municipal corporations supplied by the Commission, but the Commission shall be entitled to a lien upon said property for all moneys expended by the Commission under this Agreement and not repaid. At the expiration of this Agreement the Commission shall determine and adjust the rights of the corporations and other municipal corporations supplied by the Commission, having regard to the amounts paid by them respectively under the terms of this Agreement, and such other considerations as may appear equitable to the Commission and are approved by the Lieutenant-Governor-in-Council.

If the contracts with the Ontario Power Company are continued until December 19, 1939, this Agreement shall remain in force until that time.

EXCERPTS FROM AGREEMENT DATED JUNE 10, 1913, BETWEEN THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO and THE UNION CARBIDE COMPANY OF CANADA, LIMITED

The Commission agrees to deliver or hold in reserve for customers use, for the term or terms hereinafter provided, 16,000 horse power of electrical power.

The customer agrees with the Commission to take power exclusively from the Commission for the term extending from the date of this Agreement to December 19, 1929, and if the contracts with the Ontario Power Company are continued until December 19, 1939, the customer shall be entitled to renew this Agreement for a further consecutive term of ten years, by giving three years previous notice in writing, and if the contracts with the Ontario Power Company are further continued until December 19, 1949, the customer shall be entitled to again renew this Agreement for a further consecutive term of ten years.

To pay for such power as may be taken, the accounts to be rendered by the Commission each month, and each month's bill to be on the assumption that the maximum amount of power taken for any ten consecutive minutes in that month has been taken for the whole month, and the rate to be $14.00 per electrical horse power per annum. Bills shall be rendered by the Commission on or before the 5th. and paid by the customer on or before the 15th. of each month. All payments in arrears shall bear interest at the legal rate.

To pay each month, as a minimum, for 75 per cent. of the power held in reserve for the customer at the aforenamed rate.

It is agreed that in case any dispute shall arise relating to the question of the performance and fulfilment of any of the terms of this Agreement, the same shall be determined by two independent persons, one to be chosen by each of the parties to such dispute, and such person before proceeding with the reference shall appoint a third arbitrator to act with them.

SPECIMEN OF AGREEMENT RE LINES CLASSIFIED AS NIAGARA RURAL LINES OPERATED BY THE COMMISSION

Excerpts from Agreement dated August 23, 1912, entered into by the Hydro-Electric Power Commission of Ontario and The Municipal Corporation of the Village of Port Dalhousie

The Commission agrees with the Corporation to reserve and deliver at the earliest possible date 100 horse power or more of electrical power to the Corporation, and on the expiration of thirty days' notice in writing, which may be given by the Corporation from time to time during the continuance of this Agreement, to reserve and deliver to the Corporation additional electric power when called for, in blocks of 25 horse power until 250 is being delivered, or is reserved, and then in blocks of 100 horse power each.

In consideration of the foregoing covenants the Corporation agrees with the Commission:-

1. To pay the Commission $17.00 per horse power per year for all power taken.

2. To pay in addition annually interest at 4 per cent. upon the moneys expended by the Commission on capital account for the construction of the transmission lines and other necessary works.

3. To pay an annual part of the cost of the construction of said line, station and works, so as to form in thirty years a sinking fund for the payment of moneys advanced by the Province of Ontario, and to pay the cost of operating, maintaining, repairing, renewing and insuring the said line, station and works.

4. The amounts payable under this contract shall be paid in twelve monthly payments, and bills shall be rendered by the Commission on or before the 5th day and paid by the Corporation on or before the 15th day of each month. All payments in arrears shall bear interest at the legal rate.

5. To take electric power exclusively from the Commission during the continuance of this Agreement.

6. To pay for three-fourths of the power ordered from time to time by the Corporation and held in reserve for it, as herein provided, whether it takes the same or not. When the greatest amount of power taken for any twenty consecutive minutes during any month shall exceed during the twenty consecutive minutes three-fourths of the amount ordered by the Corporation and held in reserve, then the Corporation shall pay for this greater amount during the entire month.

If the Corporation during any month takes more than the amount of power ordered and held in reserve for it for twenty consecutive minutes, the taking of such excess shall thereafter constitute an obligation on the part of the Corporation to pay for and on the part of the Commission to hold in reserve an additional block of power in accordance with the terms and conditions of this contract.

When the power factor of the greatest amount of power taken for said twenty consecutive minutes falls below 90%, the Corporation shall pay for 90% of said power divided by the power factor.

This Agreement shall remain in force for thirty years from date thereof. If the contract with the Ontario Power Company is continued beyond the 30-year period, the Corporation may at its option continue this Agreement for one or two further consecutive terms, the first of these two additional terms being of five years duration, and the second of such length that the expiry thereof shall fall on the 1st. day of April, 1950.

The Commission shall at least annually adjust and apportion the amounts payable by the municipal corporations for such interest, sinking fund, line loss, cost of operating, maintaining, repairing, renewing and insuring line works.

If differences arise between the Corporation and the Commission the Lieutenant-Governor-in-Council may upon application fix a time and place to hear all representations that may be made by the parties, and the Lieutenant-Governor-in-Council shall in summary manner, when possible, adjust such differences and such adjustment shall be final.

This Agreement shall remain in force for thirty years from date thereof. If the contract with the Ontario Power Company is continued beyond the 30-year period, the Corporation may at its option continue this Agreement for one or two further consecutive terms, the first of these two additional terms being of five years duration, and the second of such length that the expiry thereof shall fall on the 1st. day of April, 1980.

The Commission shall at least annually adjust and apportion the amounts payable by the municipal corporations for such interest, sinking fund, line loss, cost of operating, maintaining, repairing, removing and inserting line works.

If differences arise between the Corporation and the Commission the Lieutenant-Governor-in-Council may upon application fix a time and place to hear all representations that may be made by the parties, and the Lieutenant-Governor-in-Council shall in summary manner, when possible, adjust such differences and such adjustment shall be final.